LOS 50 MEJORES PROGRAMAS LISTADOS PARA

AMSTRAD

ESPECIAL 495 PTAS.

GTS GRUPO EDITORIAL, S.A.

AMIGOS DEL
AMSTRAD

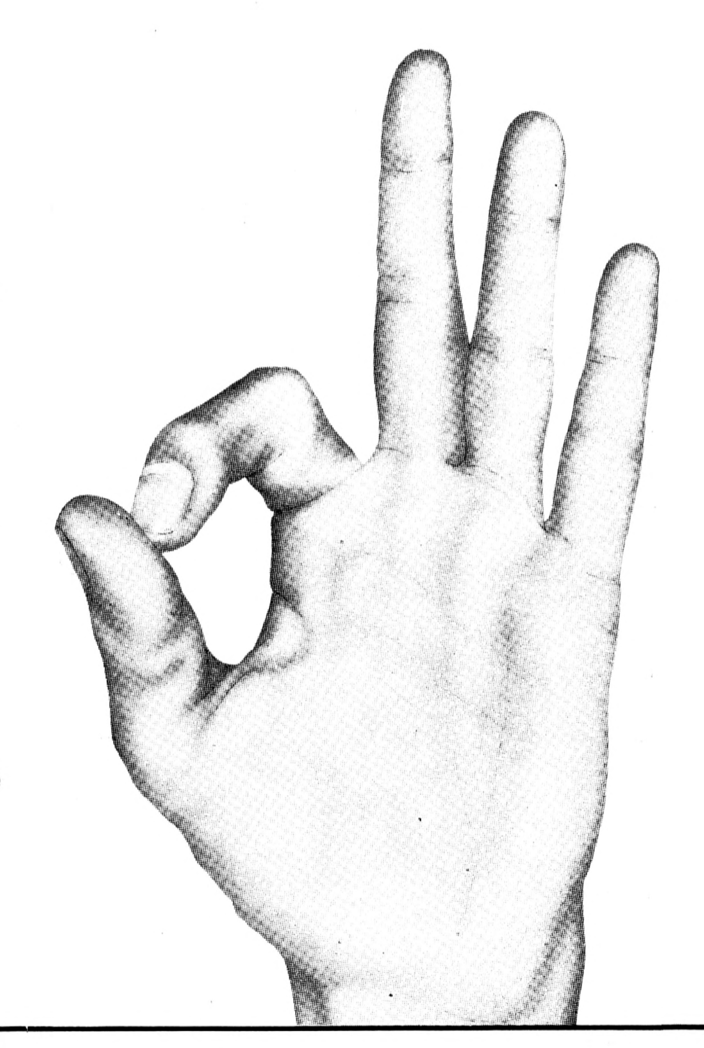
EDITORIAL

En los últimos meses ha alcanzado el AMSTRAD cotas de estimable difusión, hecho que constituye por sí mismo motivo más que suficiente para que le dedicásemos toda nuestra atención. Por ello, salimos con AMIGOS DEL AMSTRAD.

En el quiosco, veremos, una revista más para el usuario, una nueva manera y un distinto enfoque de cómo utilizar el AMSTRAD.

Con una simple mirada al sumario, en esta misma página, podéis haceros una idea de la trayectoria que pretendemos seguir. No obstante, como la revista está pensada y hecha para vosotros, sería muy interesante que participáseis en ella dando vuestra opinión, haciendo todo tipo de sugerencias, indicando, en una palabra, cómo queréis que sea vuestra revista.

Esperamos vuestras opiniones. Que os guste y que os divertáis.



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SUMARIO

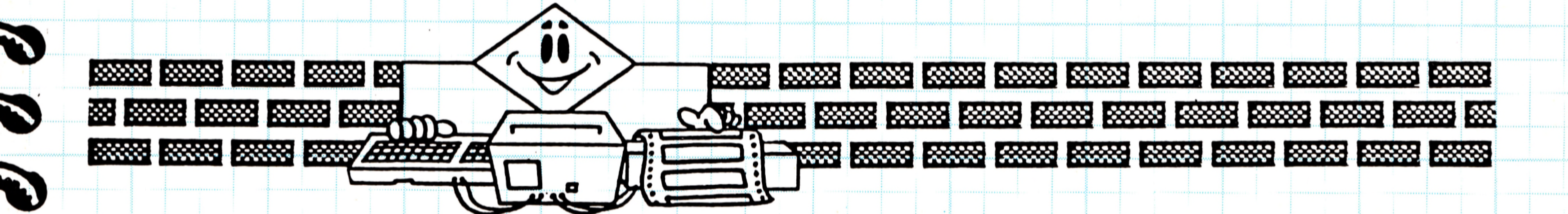
EXPLICACION DE LOS PROGRAMAS



LABERINTO MAGICO

```
10 ' PROGRAMA << LABERINTO MAGICO >>
20 '
30 BORDER 26:INK 0,26:INK 1,0:INK 2,6:INK 3,2,6:SPEED INK 5,5:PAPER 0:PEN 3:MODE
 0
40 LOCATE 2,10:PRINT"L A B E R I N T O":LOCATE 5,14:PRINT"M A G I C O":FOR T=1 T
O 255:SOUND 1,T,3
50 IF SQ(1)<>4 THEN 50 ELSE NEXT
60 FOR T=1 TO 15:SOUND 1,255,T,T
70 IF SQ(1)<>4 THEN 70 ELSE NEXT:PEN 1:MODE 1
80 RESTORE 9000:FOR Z=1 TO 22:READ E$:LOCATE 1,Z:PRINT E$;CHR$(7):NEXT
90 IF INKEY$="" THEN 90
100 PEN 1:MODE 0:LOCATE 1,5:PRINT"INTRODUCE TU NOMBRE":LOCATE 5,10:INPUT NM$
110 IF LEN(NM$)<1 OR LEN(NM$)>10 THEN 100 ELSE CLS
120 l$=CHR$(143):SYMBOL AFTER 31:SYMBOL 140,0,60,126,102,102,126,60,0:p$=CHR$(14
0):GOSUB 8000:GOSUB 8100:GOSUB 8200
130 XP=2:YP=2:GOSUB 7000
140 EVERY 100,0 GOSUB 7200
150 EVERY 21,1 GOSUB 7500
160 L$=INKEY$:IF L$="" THEN 160
170 IF L$=CHR$(240) AND TEST(XP*32-16,412-(YP-1)*16)<>1 THEN GOSUB 7100:YP=YP-1:
GOSUB 7000
180 IF L$=CHR$(241) AND TEST(XP*32-16,412-(YP+1)*16)<>1 THEN GOSUB 7100:YP=YP+1:
GOSUB 7000
190 IF L$=CHR$(242) AND TEST((XP-1)*32-16,412-YP*16)<>1 THEN GOSUB 7100:XP=XP-1:
GOSUB 7000
200 IF L$=CHR$(243) AND TEST((XP+1)*32-16,412-YP*16)<>1 THEN GOSUB 7100:XP=XP+1:
GOSUB 7000
210 IF XP=19 THEN EVERY 5000,0 GOSUB 7580:EVERY 5000,1 GOSUB 7580:GOTO 230
220 GOTO 160
230 PEN#0,3:LOCATE#0,4,10:PRINT"FELICIDADES!":FOR T=255 TO 1 STEP-1:SOUND 1,T,2:
SOUND 2,T,2
240 IF SQ(1)<>4 THEN 240
250 NEXT:MODE 0:PEN 2
260 LOCATE 5,5:PRINT NM$:LOCATE 5,10:PRINT"TARDASTE";TM:LOCATE 2,12:PRINT"laberi
ntisegundos":LOCATE 6,14:PRINT"EN SALIR":PEN 3:LOCAT
E 1,22:PRINT"P PARA OTRA PARTIDA":LOCATE 1,24:PRINT"F PARA OTRO PROGRAMA"
```

```
270 L$=INKEY$:IF L$="" THEN 270 ELSE L$=UPPER$(L$)
280 IF L$="P" THEN RUN 100 ELSE IF L$<>"F" THEN 270
290 INK 0,1:INK 1,24:PAPER 0:PEN 1:BORDER 1:MODE 1:PRINT"PREPARADO PARA EL SIGUI
ENTE PROGRAMA:":RUN""
7000 PEN#0,2:LOCATE#0,XP,YP:PRINT#0,P$:PEN#0,1:RETURN
7100 LOCATE#0,XP,YP:PRINT#0,CHR$(32):RETURN
7200 TM=TM+1:LOCATE#1,1,13:PRINT#1,TM;CHR$(7):RETURN
7300 PEN#0,1:XL=INT(RND*6+1)*3-2:YL=INT(RND*6+1)*4-3:IF XL=1 AND YL=1 THEN 7300
ELSE IF XL=1 THEN XL=2:GOTO 7310 ELSE IF YL=1 THEN Y
L=2:GOTO 7350 ELSE D=RND:IF D<0.49 THEN 7350
7310 FOR Z=XL TO XL+2:IF Z<>XP AND YL<>YP THEN LOCATE#0,Z,YL:PRINT#0,CHR$(32)
7320 NEXT:RETURN
7350 FOR Z=YL TO YL+3:IF Z<>YP AND XL<>XP THEN LOCATE#0,XL,Z:PRINT#0,CHR$(32)
7360 NEXT:RETURN
7500 GOSUB 7300
7505 XL=INT(RND*6+1)*3-2:YL=INT(RND*6+1)*4-3:IF XL=1 AND YL=1 THEN 7505 ELSE IF
XL=1 THEN XL=2:GOTO 7510 ELSE IF YL=1 THEN YL=2:GOTO
 7550 ELSE D=RND:IF D<0.49 THEN 7550
7510 FOR Z=XL TO XL+2:IF Z=XP AND YL=YP THEN Z=XL+2 ELSE LOCATE#0,Z,YL:PRINT#0,C
HR$(143)
7520 NEXT:GOTO 7580
7550 FOR Z=YL TO YL+3:IF Z=YP AND XL=XP THEN Z=YL+3 ELSE LOCATE#0,XL,Z:PRINT#0,C
HR$(143)
7560 NEXT
7580 RETURN
8000 WINDOW #0,1,20,1,25:x$=STRING$(19,143):FOR z=1 TO 25:LOCATE #0,1,z:PRINT #0
,1$:LOCATE #0,19,z:PRINT #0,1$:NEXT:LOCATE #0,1,1:PR
INT #0,x$:LOCATE #0,1,25:PRINT #0,x$
8010 z=INT(RND(TIME)*22+2):IF Z<>5 AND Z<>9 AND Z<>13 AND Z<>17 AND Z<>21 THEN L
OCATE 19,z:PRINT CHR$(32):RETURN ELSE 8010
8100 WINDOW #1,20,20,1,25:PEN #1,3:LOCATE #1,1,6:PRINT#1,"TIEMPO":RETURN
8200 X$=LEFT$(X$,LEN(X$)-1):FOR Z=4 TO 16 STEP 3:FOR Y=2 TO 24:LOCATE Z,Y:PRINT
L$:NEXT Y,Z:FOR Y=5 TO 23 STEP 4:LOCATE 1,Y:PRINT X$
:NEXT:RETURN
9000 DATA "  L A B E R I N T O   M A G I C O",,"  Es una prueba contra reloj en
un",laberinto siempre cambiante.,,"  El objetivo del
 juego es conseguir",salir de el en el minimo tiempo posible.,,"  Tu personaje s
era una pelota de color"
9010 DATA rojo que aparecera siempre en la,esquina superior-izquierda del monito
r,"y que debes llevar hasta la apertura, en","la mur
alla exterior, en el otro extremo",de la pantalla.
9020 DATA ,,"  La pelota se mueve con las cuatro",teclas del cursor.,,,,"  PULSA
 CUALQUIER TECLA PARA COMENZAR"
```



MOSQUITO

```
1 INK 0,0:INK 1,26:PAPER 0:PEN 1:BORDER 0:MODE 2
10 CLS:RESTORE 10000:FOR I=1 TO 19:READ X$:LOCATE 1,I:PRINT X$:NEXT I
12 X$=INKEY$:IF X$="" THEN 12
```

```
100 CLS:CLEAR:ra=1:INPUT "Introduce el numero de puntos de la nube ";nn
110 CLS:LOCATE 1,10:PRINT"1:Homotecia":LOCATE 1,12:PRINT"2:Rotacion sobre un pun
to":LOCATE 1,14:PRINT"3:Rotacion mas homotecia":LOCA
TE 1,16:PRINT"4:Abandonar"
112 x$=INKEY$:IF x$<"1" OR x$>"4" THEN 112
114 CLS:ON VAL(x$) GOSUB 198,220,210,250
116 ORIGIN xg,yg:GOTO 500
198 GOSUB 300
200 INPUT"Razon de la homotecia (<1 comprimir  >1 expandir) ";ra:CLS:RETURN
210 GOSUB 200:CLS
220 GOSUB 300
224 INPUT"Introduce el angulo de giro (en radianes) ";ng:RETURN
250 CLEAR:INK 0,1:INK 1,24:PAPER 0:PEN 1:MODE 1:BORDER 1:RUN"
300 CLS:INPUT"Introduce la ordenada del centro (0 a 599) ";xg:IF xg<0 OR xg>599
THEN 300 ELSE CLS
302 INPUT"Introduce la abscisa del centro (0 a 399) ";yg:IF yg<0 OR yg>399 THEN
302 ELSE CLS:RETURN
500 GOSUB 1000:CLS:FOR i=1 TO nn:x=INT(RND*600)-xg:y=INT(RND*400)-yg:xx=(ix+ra*x
)*COS(ng)-(ra*y+iy)*SIN(ng):yy=(ix+ra*x)*SIN(ng)+(ra
*y+iy)*COS(ng)
502 PLOT x,y:PLOT xx,yy:NEXT i
510 X$=INKEY$:IF X$="" THEN 510 ELSE CLS:RUN 100
1000 CLS:LOCATE 10,10:PRINT"LA NUBE PERMANECERA EN PANTALLA HASTA QUE PULSES TEC
LA"
1001 X$=INKEY$:IF X$="" THEN 1001 ELSE RETURN
10000 DATA "                                    PUNTOS",," Con este programa podras
 ver como actuan las homotecias, los giros y la comb
i-","nacion de ambos, actuando sobre una nube de puntos."
10002 DATA" El programa primero te pedira el numero de puntos y a continuacion t
endras que","elegir entre realizar una homotecia, un
a rotacion sobre un punto o una rotacion"
10004 DATA"mas una homotecia, luego tendras que darle el centro del giro o de la
 homotecia","la razon de la homotecia y el angulo de
 giro (en radianes)."
10006 DATA," Un consejo, para ver bien los giros usa angulos del orden de .05 ra
dianes, y","para las homotecias usa razones del orde
n de .9 o 1.1, pero mejor que pruebes","con todas las combinaciones posibles."
10008 DATA,,,,,,"                                PULSA TECLA PARA COMENZAR"
10 REM      +++++ MOSQUITO +++++
20 '
30 BORDER 9:INK 0,9:INK 1,24:INK 2,6:INK 3,2:PAPER 0:PEN 1:MODE 1:CLS
40 RESTORE 9000:FOR Z=3 TO 22:READ E$:LOCATE 1,Z:PRINT E$;CHR$(7):NEXT:GOSUB 910
0
50 IF INKEY$="" THEN 50 ELSE CLS
60 LOCATE 3,7:PRINT"ELECCION DE LAS TECLAS DE JUEGO:":LOCATE 5,12:PRINT"PARA SUB
IR?"
70 L$=INKEY$:IF L$="" THEN 70 ELSE IF L$<>CHR$(13) THEN LOCATE 1,1:PRINT "SUBIR:
 ";L$:S$=L$
80 LOCATE 5,12:PRINT"PARA BAJAR"
90 L$=INKEY$:IF L$="" THEN 90 ELSE IF L$<>CHR$(13) THEN LOCATE 20,1:PRINT "BAJAR
: ";L$:B$=L$
100 LOCATE 5,12:PRINT"PARA IR A LA DERECHA?"
110 L$=INKEY$:IF L$="" THEN 110 ELSE IF L$<>CHR$(13) THEN LOCATE 1,3:PRINT "DERE
CHA: ";L$:D$=L$
120 LOCATE 5,12:PRINT"PARA IR A LA IZQUIERDA?"
130 L$=INKEY$:IF L$="" THEN 130 ELSE IF L$<>CHR$(13) THEN LOCATE 20,3:PRINT "IZQ
UIERDA: ";L$:I$=L$
140 LOCATE 5,22:PRINT"ESTAS CONFORME? (S/N)"
150 L$=INKEY$:IF L$="" THEN 150 ELSE L$=UPPER$(L$):IF L$="N" THEN CLS:GOTO 60 EL
SE IF L$<>"S" THEN 150
160 BORDER 25:CLS:N=RND(TIME)
170 LOCATE 1,1:PRINT STRING$(40,143):LOCATE 1,2:PRINT STRING$(40,143):GOSUB 8000
:GOSUB 8100:GOSUB 8200:GOSUB 8300
180 PEN 3:FOR Z=1 TO TM
190 XS(Z)=INT(RND*38+2):YS(Z)=INT(RND*21)+4
200 IF TEST(XS(Z)*16-8,400-(YS(Z)*16-8))<>0 THEN 190
210 LOCATE XS(Z),YS(Z):PRINT SP$:NEXT:PEN 1
220 PEN 2:FOR Z=1 TO 10
```

```
230 XM(Z)=INT(RND*38+2):YM(Z)=INT(RND*20)+4
240 IF TEST(XM(Z)*16-8,400-(YM(Z)*16-8))<>0 THEN 230
250 LOCATE XM(Z),YM(Z):PRINT MN$:NEXT:PEN 1
260 XV=INT(RND*38+2):YV=INT(RND*21)+4:IF TEST(XV*16-8,400-(YV*16-8))<>0 THEN 260
 ELSE PEN 3:LOCATE XV,YV:PRINT V$:PEN 1
270 XA=INT(RND*40+1):YA=INT(RND*21)+4:IF TEST(XA*16-8,400-(YA*16-8))<>0 THEN 270
 ELSE PEN 3:LOCATE XA,YA:PRINT AR$:PEN 1
280 XM=INT(RND*38+2):YM=INT(RND*21)+4:IF TEST(XM*16-8,400-(YM*16-8))<>0 THEN 280
 ELSE LOCATE XM,YM:PRINT MD$:DR$="D"
290 J=0:L$=INKEY$
300 IF L$=S$ THEN GOSUB 1000:J=1
310 IF L$=B$ THEN GOSUB 1100:J=1
320 IF L$=D$ THEN GOSUB 1200:J=1
330 IF L$=I$ THEN GOSUB 1300:J=1
335 IF J=1 THEN GOTO 1400
340 IF j=1 THEN SOUND 1,500,2
350 K=RND+0.2:IF K<ZN/10 THEN 1500
360 GOTO 290
1000 LOCATE XM,YM:PRINT E$:IF YM>3 THEN YM=YM-1
1010 RETURN
1100 LOCATE XM,YM:PRINT E$:IF YM<23 THEN YM=YM+1
1110 RETURN
1200 LOCATE XM,YM:PRINT E$:IF XM<39 THEN XM=XM+1:DR$="D"
1210 RETURN
1300 LOCATE XM,YM:PRINT E$:IF XM>2 THEN XM=XM-1:DR$="I"
1310 RETURN
1400 TC=TEST(XM*16-8,400-(YM*16-8))
1410 IF TC=2 THEN E=E+100:GOSUB 8000:MN=MN-1
1420 IF TC=3 THEN 1600
1430 IF XM=XV AND YM=YV AND MN=0 THEN 2000
1440 LOCATE XM,YM:IF DR$="D" THEN PRINT MD$ ELSE PRINT MI$
1450 E=E-10:GOSUB 8000:IF E<=0 THEN 1600
1460 GOTO 340
1500 IF XM<=XA AND TEST((XA-1)*16-8,400-(YA*16-8))=0 AND XA>3 THEN LOCATE XA,YA:
PRINT E$:XA=XA-1:GOTO 1520
1510 IF XM>=XA AND TEST((XA+1)*16-8,400-(YA*16-8))=0 AND XA<38 THEN LOCATE XA,YA
:PRINT E$:XA=XA+1
1520 IF YM<=YA AND TEST(XA*16-8,400-((YA-1)*16-8))=0 AND YA>4 THEN LOCATE XA,YA:
PRINT E$:YA=YA-1:GOTO 1540
1530 IF YM>=YA AND TEST(XA*16-8,400-((YA+1)*16-8))=0 AND YA<23 THEN LOCATE XA,YA
:PRINT E$:YA=YA+1
1540 PEN 3:LOCATE XA,YA:PRINT AR$:PEN 1
1550 IF XA=XM AND YA=YM THEN 1600 ELSE GOTO 290
1600 FOR T=100 TO 1200 STEP 100:SOUND 1,T,T/100:NEXT:LOCATE 16+MS*3,2:PRINT CHR$
(143):MS=MS-1:FOR T=1 TO 1000:NEXT
1610 IF MS<=0 THEN 1690
1620 LOCATE 5,10:PRINT"CONTINUAMOS? (S/N)"
1630 L$=INKEY$:IF L$="" THEN 1630 ELSE L$=UPPER$(L$):IF L$="S" THEN GOSUB 9150:G
OTO 160 ELSE IF L$<>"N" THEN 1630 ELSE 1700
1690 LOCATE 4,10:PRINT"HAN MUERTO TODOS TUS MOSQUITOS":FOR T=1 TO 2000:NEXT
1700 CLS:LOCATE 1,12:PRINT"PARA OTRA PARTIDA PULSA LA TECLA P":LOCATE 1,14:PRINT
"PARA DEJAR EL PROGRAMA PULSA F"
1710 L$=INKEY$:IF L$="" THEN 1710 ELSE L$=UPPER$(L$):IF L$="P" THEN RUN ELSE IF
L$<>"F" THEN 1710
1720 BORDER 1:INK 0,1:INK 1,24:PAPER 0:PEN 1:CLS:PRINT"PERPARADO PARA EL SIGUIEN
TE PROGRAMA:":RUN""
2000 FOR Z=1 TO TM:LOCATE XS(Z),YS(Z):PRINT E$:PT=PT+10:SOUND 1,100,3:GOSUB 8100
:FOR T=1 TO 100:NEXT T,Z:ZN=ZN+1:GOSUB 9150:GOTO 160
8000 PEN 3:PAPER 1:LOCATE 1,1:PRINT USING"ENERGIA:####";E:PAPER 0:PEN 1
8010 IF MN=0 THEN LOCATE XV,YV:PRINT CHR$(249)
8020 RETURN
8100 PEN 3:PAPER 1:LOCATE 14,1:PRINT USING"PUNTOS:#####";PT:PAPER 0:PEN 1:RETURN
8200 PEN 3:PAPER 1:LOCATE 27,1:PRINT USING"HABITACION:###";ZN:PAPER 0:PEN 1:RETU
RN
8300 PEN 3:PAPER 1:LOCATE 5,2:PRINT "MOSQUITOS:":FOR Z=1 TO MS:LOCATE 16+Z*3,2:P
RINT MD$:NEXT:PAPER 0:PEN 1:RETURN
9000 DATA "                 M O S Q U I T O",," En MOSQUITO tendras que sobrevivir e
n","una habitacion, que es un ambiente muy",hostil p
ara los de tu especie.,," Para tener energia comeras de los","frutos que hay en
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 la habitacion, pero"
9010 DATA con cuidado de no tropezar con los,insecticidas ni con el aracnido que
,trataran de eliminarte.,,"  Por fin podras salir po
r la ventana",cuando te hayas comido todos los frutos,de la habitacion.,,"  El m
ovimiento del mosquito se realiza"
9020 DATA con las teclas que tu elijas.,,"     PULSA UNA TECLA PARA CONTINUAR"
9100 SYMBOL AFTER 243:SYMBOL 244,99,50,30,30,47,255,42,21:SYMBOL 245,198,76,120,
120,244,255,84,168
9120 SYMBOL 246,4,8,110,255,255,255,126,60:SYMBOL 247,60,38,36,60,44,52,52,60:SY
MBOL 248,24,60,102,255,189,165,165,165
9130 SYMBOL 249,255,153,153,153,153,153,153,255:MI$=CHR$(244):MD$=CHR$(245):MN$=
CHR$(246):SP$=CHR$(247):AR$=CHR$(248):V$=CHR$(143)
9140 E$=CHR$(32):E=500:PT=0:ZN=1:MS=5:DIM XM(10),YM(10)
9150 E=500:MN=10:TM=10+ZN*5:XS(1)=1:YS(1)=1:ERASE XS,YS:DIM XS(TM),YS(TM):RETURN
```



ESPACIO

```
10 SYMBOL AFTER 239
20 INK 0,0:INK 1,26:INK 3,24,8:PAPER 0
30 MODE 0:BORDER 0:GOSUB 380
40 LOCATE 1,13:PEN 3:PRINT"      ESPACIO    ":FOR t=10 TO 500 STEP 10:SOUND 5,t,1
0:NEXT
50 MODE 1:PEN 1:PRINT:PRINT:PRINT"   Al regresar de tu paseo espacial "
60 PRINT "  encuentras que tu nave ha sido des-"
70 PRINT "  montada por unos diminutos seres "
80 PRINT "  galacticos. "
90 PRINT:PRINT "   Debes recontruirla antes de que se"
100 PRINT "  agote tu reserva de oxigeno, para "
110 PRINT "  ello tienes que colocar sus piezas"
120 PRINT "  sobre la plataforma de despegue "
130 PRINT "  empezando por la base y terminando
140 PRINT "  do por el FUEL...Pero......"
150 PRINT:PRINT   "!!TEN CUIDADO CON LOS EXTRATERRESTRES!!"
160 PRINT:PRINT:PRINT"        (UTILIZA JOYSTICK O CURSOR)"
170 LOCATE 1,22:PRINT"PARA COMENZAR EL JUEGO PULSA UNA TECLA"
180 IF INKEY$="" THEN 180 ELSE CLS
190 SYMBOL 250,24,60,90,126,60,24,231,153
200 SYMBOL 251,1,3,6,4,131,65,39,31
210 SYMBOL 252,2,1,1,2,2,2,2,6
220 SYMBOL 253,128,192,96,32,192,128,224,112
230 SYMBOL 254,200,135,128,64,64,64,64,96
240 SYMBOL 240,1,3,3,5,4,5,5,9
250 SYMBOL 241,10,10,11,10,11,10,11,10
260 SYMBOL 242,128,192,192,160,32,160,160,144
270 SYMBOL 243,80,208,80,208,80,208,80,208
280 SYMBOL 244,27,21,21,22,20,25,27,29
290 SYMBOL 245,216,168,168,104,40,152,216,184
300 SYMBOL 246,50,116,99,116,104,112,96,64
310 SYMBOL 247,76,46,198,46,22,14,6,2
320 SYMBOL 248,0,0,0,63,127,149,181,149
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```
330 SYMBOL 249,0,0,0,240,248,44,108,44
340 SYMBOL 255,181,177,127,63,0,0,0,0
350 SYMBOL 239,108,36,248,240,0,0,0,0
360 MODE 1:INK 0,0:INK 1,26 :BORDER 0
370 PR=1
380 FOR i=1 TO 640 STEP 4
390 PLOT i,RND*400,1
400 NEXT
410 DEG
420 MOVE 20,350
430 FOR i=1 TO 360 STEP 3
440 DRAW 25+40*SIN(i),350+40*COS(i)
450 NEXT
460 MOVE 12,355:FILL 1
470 IF PR=0 THEN RETURN
480  x=340:y=340:fx=270:fy=360
490 n1x=600:n1y=265:n2x=150:n2y=350
500 m1x=-10:m2x=650:m3x=-10:m4x=650
510 LOCATE 1,24:PRINT "OXIGENO";
520 MOVE 1,15,3:DRAW 250,15:DRAW 250,0:DRAW 1,0:DRAW 1,15
530 MOVE 3,12:FILL 3
540 TAG
550 GOSUB 990
560 z= INT(TIME/300)
570 MOVE x,y,1,0:PRINT CHR$(251);:PRINT CHR$(253);
580 MOVE x,y-16:PRINT CHR$(252);:PRINT CHR$(254);
590 IF a>640 THEN a=0
600 a=a+7
610 m1x=((a)*2)MOD 640:m1y=(60*SIN(a))+240+RND*16
620 m3x=((a)*2)MOD 640:m3y=(40*SIN(a))+125+RND*16
630 m2x=((632-a)*2)MOD 640:m2y=(60*SIN(a))+200+RND*15
640 MOVE m1x,m1y,3:PRINT CHR$(250);
650 MOVE m3x,m3y,3:PRINT CHR$(250);
660 MOVE m2x,m2y:PRINT CHR$(250);
670 t=(INT(TIME/300)-z)*2
680 MOVE 400,10:DRAW 460,10:DRAW 460,0:DRAW 400,0:DRAW 400,10
690 MOVE 430,2:FILL 1
700 MOVE 250-t,15:PRINT CHR$(32);
710 IF T>250 THEN 1300
720 IF M1X+16>X AND M1X<X+32 AND M1Y-16<Y AND M1Y>Y-32 THEN TAGOFF:PRINT CHR$(7)
;:TAG:Z=Z-5
730 IF M2X+16>X AND M2X<X+32 AND M2Y-16<Y AND M2Y>Y-32 THEN TAGOFF:PRINT CHR$(7)
;:TAG:Z=Z-5
740 IF M3X+16>X AND M3X<X+32 AND M3Y-16<Y AND M3Y>Y-32 THEN TAGOFF:PRINT CHR$(7)
;:TAG:Z=Z-5
750 IF INKEY(0)<>-1 OR INKEY(72)<>-1 THEN C1=1:cy=1
760 IF INKEY(2)<>-1 OR INKEY(73)<>-1 THEN C1=1:cy=-1
770 IF INKEY(8)<>-1 OR INKEY(74)<>-1 THEN c1=1:cx=-1
780 IF INKEY(1)<>-1 OR INKEY(75)<>-1 THEN c1=1:cx=1
790 IF c1=0 GOTO 820
800 MOVE x,y,0,2:PRINT CHR$(251);:PRINT CHR$(253);
810 MOVE x,y-16,0,2:PRINT CHR$(252);:PRINT CHR$(254);:c1=0
820 IF cy=1 THEN y=y+8:cy=0
830 IF cy=-1 THEN y=y-8:cy=0
840 IF cx=1 THEN x=x+8:cx=0
850 IF cx=-1 THEN x=x-8:cx=0
860 IF x>640 THEN x=0
870 IF n1x>640 THEN n1x=x+30
880 IF n2x>640 THEN n2x=x+30
890 IF fx>640 THEN fx=x+31
900 IF x+32>n1x AND x<n1x+32 AND y>n1y-32 AND y-32<n1y THEN MOVE n1x,n1y,,2:PRIN
T CHR$(244);:PRINT CHR$(245);:MOVE n1x,n1y-16:PRINT
CHR$(246);:PRINT CHR$(247);:cn=1:GOTO 970
910 IF x+32>n2x AND x<n2x+32 AND y>n2y-32 AND y-32<n2y THEN MOVE n2x,n2y,,2:PRIN
T CHR$(240);:PRINT CHR$(242);:MOVE n2x,n2y-16:PRINT
CHR$(241);:PRINT CHR$(243);:cn=1:GOTO 1020
920 IF x+32>fx AND x<fx+32 AND y>fy-32 AND y-32<fy THEN MOVE fx,fy,,2:PRINT CHR$
(248);:PRINT CHR$(249);:MOVE fx,fy-16:PRINT CHR$(255
);:PRINT CHR$(239);:cn=1:GOTO 1070
```

```
930 MOVE m1x,m1y,,2:PRINT CHR$(32);
940 MOVE m3x,m3y:PRINT CHR$(32);
950 MOVE m2x,m2y:PRINT CHR$(32);
960 GOTO 570
970 IF cn=1 AND h=0 THEN n1x=x+30:n1y=y
980 IF n1x+24>400 AND n1x<460 AND n1y<75 THEN n1X=410:n1y=42:h=1
990 MOVE n1x,n1y,1,0:PRINT CHR$(244);:PRINT CHR$(245);
1000 MOVE n1x,n1y-16:PRINT CHR$(246);:PRINT CHR$(247);
1010 IF cn=1 THEN 930
1020 IF cn=1 AND h=1 THEN n2x=x+26:n2y=y
1030 IF n2x+24>400 AND n2x<460 AND n2y<90 AND n2y>32 THEN n2X=410:n2y=74:h=2
1040 MOVE n2x,n2y,1,0:PRINT CHR$(240);:PRINT CHR$(242);
1050 MOVE n2x,n2y-16:PRINT CHR$(241);:PRINT CHR$(243);
1060 IF cn=1 THEN 930
1070 IF cn=1 AND h=2 THEN fx=x+31:fy=y
1080 IF fx+20>400 AND fx<450 AND fy<100 THEN fX=410:fy=-20:y=-20:GOTO 1130
1090 MOVE fx,fy,1,3:PRINT CHR$(248);:PRINT CHR$(249);
1100 MOVE fx,fy-16:PRINT CHR$(255);:PRINT CHR$(239);
1110 IF cn=1 THEN 930
1120 RETURN
1130 n2y=n2y+7:n1y=n1y+7
1140 n1x=n1x-2:n2x=n2x-2
1150 MOVE n2x,n2y,1,0:PRINT CHR$(240);:PRINT CHR$(242);
1160 MOVE n2x,n2y-16:PRINT CHR$(241);:PRINT CHR$(243);
1170 MOVE n1x,n1y:PRINT CHR$(244);:PRINT CHR$(245);
1180 MOVE n1x,n1y-16:PRINT CHR$(246);:PRINT CHR$(247);
1190 FRAME:FRAME:FRAME:FRAME:FRAME
1200 IF n1y>430 THEN 1270
1210 MOVE n2x,n2y,0,2:PRINT CHR$(240);:PRINT CHR$(242);
1220 MOVE n2x,n2y-16:PRINT CHR$(241);:PRINT CHR$(243);
1230 MOVE n1x,n1y:PRINT CHR$(244);:PRINT CHR$(245);
1240 MOVE n1x,n1y-16:PRINT CHR$(246);:PRINT CHR$(247);
1250 MOVE n1x,n1y-23:PRINT CHR$(143);:PRINT CHR$(143);
1260 GOTO 1130
1270 MODE 1: BORDER 17 :INK 0,26 :INK 1,0
1280 LOCATE 1,10 :PRINT "*** !! ENHORABUENA LO COSEGUISTES !! ***"
1290 GOTO 1340
1300 MODE 1: BORDER 17 :INK 0,26 :INK 1,0
1310 LOCATE 5,10 :PRINT "*** LO SIENTO TE HAS QUEDADO ***"
1320 PRINT:PRINT"     ***        SIN OXIGENO          ***"
1330 GOTO 1340
1340 LOCATE 1,19:PRINT "    *** LO INTENTAS DE NUEVO [S/N] ***"
1350 A$=INKEY$
1360 IF A$="S" OR A$="s" THEN CLEAR:GOTO 190
1370 IF A$="N" OR A$="n" THEN CLS:END
1380 GOTO 1350
```



FANTASMA

```
10 CLEAR
20 REM &&&&&&&& PRESENTACION &&&&&&&&
30 MODE 0:IN  0,0:BORDER 0
```

```
40 INK 1,3
50 CLS
60 LOCATE 3,6:PRINT"F A N T A S M A"
70 SOUND 1,568,20,7:SOUND 1,638,20,7:SOUND 1,568,150,7:SOUND 1,758,40,7:SOUND 1,
716,40,7:SOUND 1,758,40,7:SOUND 1,851,40,7:SOUND 1,9
56,40,7:SOUND 1,902,170,7:SOUND 1,851,170,7
80 FOR X=1 TO 700:NEXT
90 FOR SA1=1 TO 18
100 LOCATE 4,SA1:PRINT CHR$(149):FOR RET=1 TO 200:NEXT RET:NEXT SA1
110 FOR SA2=1 TO 24
120 LOCATE 16,SA2:PRINT CHR$(133):FOR RET=1 TO 200:NEXT RET:NEXT SA2
130 FOR SA3=1 TO 13
140 LOCATE 12,SA3:PRINT CHR$(133):FOR RET=1 TO 200:NEXT RET:NEXT SA3
150 FOR SA4=1 TO 7
160 LOCATE 19,SA4:PRINT CHR$(149):FOR RET=1 TO 200:NEXT RET:NEXT SA4
170 FOR SA5=1 TO 20
180 LOCATE 8,SA5:PRINT CHR$(138):FOR RET=1 TO 200:NEXT RET:NEXT SA5
190 FOR SA6=1 TO 15
200 LOCATE 14,SA6:PRINT CHR$(149):FOR RET=1 TO 200:NEXT RET:NEXT SA6
210 CO=0
220 X=INT(RND(1)*20)
230 Y=INT(RND(1)*24)
240 IF (Y>24 OR Y<1) OR (X>20 OR X<1) THEN 220
250 LOCATE X,Y:PRINT CHR$(143)
260 SOUND 1,Y,X:SOUND 1,CO,Y
270 CO=CO+1
280 IF CO>200 THEN 300
290 GOTO 220
300 MODE 1
310 INK 0,1:INK 1,16:CLS
320 REM &&&&&& INSTRUCCIONES &&&&&
330 LOCATE 12,3:PRINT"F A N T A S M A"
340 LOCATE 12,4:PRINT"==============="
350 LOCATE 1,6:PRINT"Te encuentras en un oscuro bosque de las tierras del mas al
la, y delante de ti se planta una casa plagada de fa
ntasmas horribles que quieren volverte loco."
360 PRINT"Con la ayuda de tu tirachinas debes intentar acabar con ellos en un ti
empo limite, o de lo contrario te veras perdido."
370 PRINT:PRINT"              4         5          6"
380 PRINT"          ";CHR$(241);"         ";CHR$(241);"         ";CHR$(241)

390 PRINT "      VENTANA   VENTANA   VENTANA"
400 PRINT "     IZQUIERDA  CENTRAL   DERECHA"
410 PRINT:PRINT"              1         2          3"
420 PRINT"          ";CHR$(241);"         ";CHR$(241);"         ";CHR$(241)
430 PRINT "       PUERTA    PUERTA    PUERTA"
440 PRINT "     IZQUIERDA   CENTRAL   DERECHA"
450 PEN 3:LOCATE 13,24:PRINT"PULSA UNA TECLA"
460 F$=INKEY$
470 IF F$="" THEN 460 ELSE 480
480 MODE 0
490 PAPER 5:BORDER 1:INK 1,26:CLS
500 TIEMPO=0

510 REM ====== FANTASMAS ======
520 REM ===MARCEL RISQUES 85===
530 REM ======================
540 REM &&&&&&&& ESTRELLAS &&&&&&&&
550 A=0
560 ESTREX=INT(RND(1)*640):ESTREY=INT(RND(1)*400)
570 PLOT ESTREX,ESTREY:A=A+1
580 IF A=100 THEN 600
590 GOTO 560
600 REM &&&&&&&&& CASA &&&&&&&&&&
610 FOR XCASA=4 TO 17
620 FOR YCASA=7 TO 17
630 PEN 3:LOCATE XCASA,YCASA:PRINT CHR$(143):NEXT:NEXT

640 REM &&&&&&&&&& SUELO &&&&&&&&&&
```

```
650 FOR SUEX=1 TO 20:FOR SUEY=18 TO 25
660 PEN 9:LOCATE SUEX,SUEY:PRINT CHR$(127):NEXT:NEXT
670 REM &&&&&&&&&& VENTANAS &&&&&&&&&&&
680 SOUND 1,18,10,5:SOUND 1,1000,4:SOUND 1,200,12,7:SOUND 1,100,18,4
690 X=0:PEN 8:LOCATE 5,9:PRINT CHR$(131):LOCATE 6,9:PRINT CHR$(131):LOCATE 5,10:
PRINT CHR$(140):LOCATE 6,10:PRINT CHR$(140)
700 LOCATE 10,9:PRINT CHR$(131):LOCATE 11,9:PRINT CHR$(131):LOCATE 10,10:PRINT C
HR$(140):LOCATE 11,10:PRINT CHR$(140)
710 LOCATE 15,9:PRINT CHR$(131):LOCATE 16,9:PRINT CHR$(131):LOCATE 15,10:PRINT C
HR$(140):LOCATE 16,10:PRINT CHR$(140)
720 REM &&&&&&&&&&& PUERTAS &&&&&&&&&&&
730 FOR YPUERTAS=14 TO 16
740 LOCATE 6,YPUERTAS:PRINT CHR$(206):LOCATE 7,YPUERTAS:PRINT CHR$(206)
750 LOCATE 10,YPUERTAS:PRINT CHR$(206):LOCATE 11,YPUERTAS:PRINT CHR$(206)
760 LOCATE 14,YPUERTAS:PRINT CHR$(206):LOCATE 15,YPUERTAS:PRINT CHR$(206):NEXT

770 REM &&&&&&&&&& LUNA &&&&&&&&&&&&
780 PEN 2:LOCATE 2,2:PRINT CHR$(214):LOCATE 2,3:PRINT CHR$(143):LOCATE 2,4:PRINT
 CHR$(213):LOCATE 3,2:PRINT CHR$(212):LOCATE 3,4:PRI
NT CHR$(215)
790 REM &&&&&&&&&&&FANTASMAS&&&&&&&&&&
800 PEN 4
810  FAN=INT(RND(1)*6+1)
820 IF FAN<1 OR FAN>6 THEN 810
830 IF FAN=1 THEN LOCATE 5,10:PRINT CHR$(224):FOR TI=1 TO 320:X=1:NEXT:GOTO 890
840 IF FAN=2 THEN LOCATE 11,10:PRINT CHR$(224):FOR TI=1 TO 320:X=2:NEXT:GOTO 890
850 IF FAN=3 THEN LOCATE 15,10:PRINT CHR$(224):FOR TI=1 TO 320:X=3:NEXT:GOTO 890
860 IF FAN=4 THEN LOCATE 7,15:PRINT CHR$(224):LOCATE 7,16:PRINT CHR$(253):FOR TI
=1 TO 320:X=4:NEXT:GOTO 890
870 IF FAN=5 THEN LOCATE 10,15:PRINT CHR$(224):LOCATE 10,16:PRINT CHR$(253):FOR
TI=1 TO 320:X=5:NEXT:X=1:GOTO 890
880 IF FAN=6 THEN LOCATE 15,15:PRINT CHR$(224):LOCATE 15,16:PRINT CHR$(253):FOR
TI=1 TO 320:X=6:NEXT:GOTO 890
890 REM &&&&&&&&&& DISPAROS &&&&&&&&&&
900 A$=INKEY$:IF A$="4" AND X=1 THEN LOCATE 5,10:PRINT CHR$(225):FOR TI=1 TO 300
:NEXT:LOCATE 5,10:PRINT CHR$(238):SOUND 1,50,20:PUNT
OS=PUNTOS+1:GOTO 670
910 A$=INKEY$:IF A$="5" AND X=2 THEN LOCATE 11,10:PRINT CHR$(225):FOR TI=1 TO 30
0:NEXT:LOCATE 11,10:PRINT CHR$(238):SOUND 1,50,20:PU
NTOS=PUNTOS+1:GOTO 670
920 A$=INKEY$:IF A$="6" AND X=3 THEN LOCATE 15,10:PRINT CHR$(225):FOR TI=1 TO 30
0:NEXT:LOCATE 15,10:PRINT CHR$(238):SOUND 1,50,20:PU
NTOS=PUNTOS+1:GOTO 670
930 A$=INKEY$:IF A$="1" AND X=4 THEN LOCATE 7,15:PRINT CHR$(225):FOR TI=1 TO 300
:NEXT:LOCATE 7,15:PRINT CHR$(238):SOUND 1,50,20:PUNT
OS=PUNTOS+1:GOTO 670
940 A$=INKEY$:IF A$="2" AND X=5 THEN LOCATE 10,15:PRINT CHR$(225):FOR TI=1 TO 30
0:NEXT:LOCATE 10,15:PRINT CHR$(238)SOUND 1,50,20:PUN
TOS=PUNTOS+1:GOTO 670
950 A$=INKEY$:IF A$="3" AND X=6 THEN LOCATE 15,15:PRINT CHR$(225):FOR TI=1 TO 30
0:NEXT:LOCATE 15,15:PRINT CHR$(238):SOUND 1,50,20:PU
NTOS=PUNTOS+1:GOTO 670
960 REM &&&&&&&& MARCADOR &&&&&&&&
970 PEN 3
980 PEN 6:LOCATE 8,24:PRINT "PUNTOS: ";PUNTOS
990 REM &&&&&&&& TIEMPO &&&&&&&&
1000 TIEMPO=TIEMPO+1
1010 IF TIEMPO=40 THEN 1030
1020 GOTO 670
1030 REM &&&&&&& OTRA PARTIDA &&&&&&&
1040 CLS:PEN 12
1050 LOCATE 4,18:PRINT"PUNTUACION: ";PUNTOS
1060 LOCATE 3,8:PRINT"GRACIAS CAMPEON"
1070 LOCATE 2,25:PRINT"OTRA PARTIDA (S/N)"
1080 L$=INKEY$
1090 IF L$="S" OR L$="s"  THEN 10
1100 IF L$="N" OR L$="n" THEN MODE 1:PAPER 0:PEN 3
1110 IF  NOT (L$="S" OR L$="s") AND NOT (L$="N" OR L$="n")  THEN 1080
1120 IF L$="" THEN 1080
```



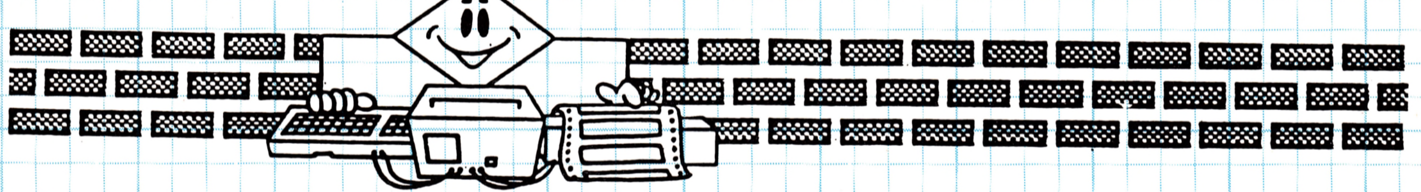
LA ABEJA

```
10 '     <<< L A    A B E J A >>>
20 ' COPYRIGHT:                                              M. JESUS CABELLO MARTINEZ
                                        Y
   F. ALONSO-PASTOR DEL COSO                           #1985#
25 MODE 0:BORDER 0:INK 0,0:INK 1,2,8:PAPER 0:PEN 1:CLS:SPEED INK 5,5:LOCATE 3,12
:PRINT"L A   A B E J A":FOR T=1 TO 2000:NEXT
30 MODE 1:BORDER 0:SPEED INK 50,50:SYMBOL AFTER 0:RESTORE 9000:FOR Z=0 TO 11:REA
D C:INK Z,C:NEXT:INK 12,2,8:INK 13,6,26:PAPER 0:PEN
1:CLS:FOR Z=1 TO 22:READ E$:LOCATE 1,Z:PRINT E$:SOUND 1,100,5:NEXT:SOUND 1,500,1
0:GOSUB 9200
40 IF INKEY$="" THEN 40
50 CLS:IN$=CHR$(174):J$=STRING$(39,32):LOCATE 2,5:PRINT"DEFINICION DE LAS TECLAS
 DE JUEGO:":LOCATE 1,7:PRINT IN$;"PARA SUBIR LA ABEJ
A?":GOSUB 9100:S$=L$:LOCATE 1,7:PRINT J$:LOCATE 1,7:PRINT "PARA SUBIR ";S$
60 LOCATE 1,9:PRINT IN$;"PARA BAJAR LA ABEJA?":GOSUB 9100:B$=L$:LOCATE 1,9:PRINT
 J$:LOCATE 1,9:PRINT "PARA BAJAR ";B$
70 LOCATE 1,11:PRINT IN$;"PARA LLEVAR A LA DERECHA A LA ABEJA?":GOSUB 9100:D$=L$
:LOCATE 1,11:PRINT J$:LOCATE 1,11:PRINT "PARA LA DER
ECHA ";D$
80 LOCATE 1,13:PRINT IN$;"PARA LLEVAR A LA IZQUIERDA A LA ABEJA?":GOSUB 9100:I$=
L$:LOCATE 1,13:PRINT J$:LOCATE 1,13:PRINT "PARA LA I
ZQUIERDA ";I$
85 LOCATE 1,15:PRINT IN$;"PARA ABANDONAR EL JUEGO?":GOSUB 9100:AB$=L$:LOCATE 1,1
5:PRINT J$:LOCATE 1,15:PRINT "PARA ABANDONAR EL JUEG
O ";AB$
87 LOCATE 1,18:PRINT IN$;"NIVEL DE JUEGO? (1 DIFICIL - 5 FACIL)":GOSUB 9100:VNJ=
VAL(L$):IF VNJ<1 OR VNJ>5 THEN 87 ELSE LOCATE 1,18:P
RINT J$:LOCATE 1,18:PRINT"NIVEL";VNJ
90 LOCATE 1,23:PRINT"SI ESTAS DE ACUERDO CON ESTAS TECLAS    PULSA S SINO PULSA
CUALQUIER OTRA TECLA"
100 L$=INKEY$:IF L$="" THEN 100 ELSE IF L$<>"S" AND L$<>"s" THEN 50
105 NJ=VNJ*10:PT=0:NV=1:VD=5:KD$=STRING$(4,46)
110 MODE 0:SPEED INK 50,50:GOSUB 8200:FT=-1
120 LL$=STRING$(20,LD$):PEN 2:LOCATE 1,2:PRINT LL$:LOCATE 1,24:PRINT LL$:FOR Z=3
 TO 23:LOCATE 1,Z:PRINT LD$:LOCATE 20,Z:PRINT LD$:NE
XT
130 GOSUB 8000:GOSUB 8300
140 RANDOMIZE TIME:FOR Z=1 TO NV*10 STEP NV:O=INT(Z/10+1):IF O>6 THEN O=6
150 XO=INT(RND*18+2):YO=INT(RND*21+3):IF TEST(XO*32-16,408-(YO*16))<>0 THEN 150
160 LOCATE XO,YO:ON O GOSUB 9300,9310,9320,9330,9340,9350
170 NEXT:PEN 2:FOR Z=1 TO INT(NV/5+1):GOSUB 8100:NEXT:YA=4
180 FOR XI=2 TO 19:IF TEST(XI*32-16,408-(YA*16))=0 AND TEST(XI*32-16,408-((YA+1)
*16))=0 AND TEST(XI*32-16,411-(YA*16))=0 AND TEST(XI
*32-16,411-((YA+1)*16))=0 THEN XA=XI:XI=20
190 NEXT:IF XI=20 THEN YA=YA+1:GOTO 180
200 SPEED INK 2,2:SX=1:SY=0:GOSUB 9550:FOR T=1000 TO 10 STEP -5:SOUND 1,T,1:SOUN
D 2,T+10,1:NEXT
205 IF SQ(1)<>4 THEN 205
210 L$=INKEY$:IF L$=AB$ THEN 10000
215 FOR T=1 TO NJ:NEXT
```

```
220 IF L$=S$ THEN SY=-1:SX=0
230 IF L$=B$ THEN SY=1:SX=0
240 IF L$=D$ THEN SX=1:SY=0
250 IF L$=I$ THEN SX=-1:SY=0
255 TO=TEST((XA+SX)*32-16,412-((YA+SY)*16)):T1=TEST((XA+SX)*32-16,412-((YA+SY-1)
*16)):IF TO=2 OR T1=2 THEN 9600
260 TO=TEST((XA+SX)*32-16,408-((YA+SY)*16)):T1=TEST((XA+SX)*32-16,408-((YA+SY-1)
*16)):IF TO<>0 AND TO<>4 OR T1<>0 AND T1<>4 THEN GOS
UB 7000:IF TO=T1 THEN GOSUB 7000
270 SOUND 1,500,3:GOSUB 9500:XA=XA+SX:YA=YA+SY:SOUND 2,10,3:GOSUB 9550:IF FT<10
THEN 210
280 FOR T=1000 TO 10 STEP -10:SOUND 1,T,3,15:SOUND 2,T+100,2,12:SOUND 3,T+500,1,
10:NEXT
290 IF SQ(1)<>4 THEN 290
300 NV=NV+1:FOR Z=1 TO 100:L$=INKEY$:NEXT:GOTO 110
7000 IF TO=5 OR T1=5 THEN PT=PT+10:GOSUB 8000
7010 IF TO=3 OR T1=3 THEN PT=PT+20:GOSUB 8000
7020 IF TO=6 OR T1=6 THEN PT=PT+40:GOSUB 8000
7030 IF TO=9 OR T1=9 THEN PT=PT+60:GOSUB 8000
7040 IF TO=10 OR T1=10 THEN PT=PT+50:GOSUB 8000
7050 IF TO=11 OR T1=11 THEN PT=PT+30:GOSUB 8000
7060 RETURN
8000 PEN 10:LOCATE 4,1:PRINT USING"PUNTOS: ######";PT:SOUND 1,50,3:FT=FT+1:RETUR
N
8100 PEN 2:RANDOMIZE TIME:KD=RND:XI=INT(RND*16)+3:XF=INT(RND*16)+3:YI=INT(RND*19
+4):YF=INT(RND*19+4)
8105 IF ABS(XF-XI)>12 OR ABS(YF-YI)>14 THEN 8100 ELSE IF KD>0.5 THEN 8140
8110 IF ABS(XF-XI)<2 OR ABS(YF-YI)<2 OR TEST(XI*32-16,408-(YI*16))<>0 THEN 8100
8120 FOR K1=XI TO XF STEP SGN(XF-XI):IF TEST(K1*32-16,408-(YI*16))=0 THEN LOCATE
 K1,YI:PRINT LD$ ELSE K1=99*SGN(XF-XI)
8130 NEXT:RETURN
8140 FOR K1=YI TO YF STEP SGN(YF-YI):IF TEST(XI*32-16,408-(K1*16))=0 THEN LOCATE
 XI,K1:PRINT LD$ ELSE K1=99*SGN(YF-YI)
8150 NEXT:RETURN
8200 PEN 10:LOCATE 6,1:PRINT"FRUTAS:":FOR O=1 TO 6:XO=3:YO=O*3+3:LOCATE XO,YO:ON
 O GOSUB 9300,9310,9320,9330,9340,9350:PEN 13:LOCATE
 5,YO:PRINT KD$;USING "## ptos.";O*10:NEXT:PEN 12:LOCATE 4,24:PRINT"PARA CONTINU
AR":LOCATE 4,25:PRINT"PULSA UNA TECLA"
8210 IF INKEY$="" THEN 8210 ELSE CLS:RETURN
8300 PEN 10:LOCATE 6,25:PRINT USING"VIDAS:##";VD:RETURN
9000 DATA 0,24,6,3,15,19,12,21,9,16,8,7
9010 DATA "           L A   A B E J A",,,"  Es un juego emocionante en el que lo",
,mas importante es comerse muchos frutos.,,,"  Sin e
mbargo, las paredes te impediran",,hacerlo y tienes que procurar no chocar,,con
ellas.
9020 DATA ,,,"  Las teclas de movimiento de la abeja",,podras elegirlas tu mismo
.,,,"  PULSA CUALQUIER TECLA PARA COMENZAR"
9100 L$=INKEY$:IF L$="" THEN 9100 ELSE RETURN
9200 SYMBOL 176,8,28,46,111,95,95,46,28:SYMBOL 177,8,110,223,191,191,94,56,0:SYM
BOL 178,6,6,14,30,60,56,28,12:SYMBOL 179,0,0,60,90,2
19,219,90,60:SYMBOL 180,102,24,0,0,0,0,0,0
9210 SYMBOL 181,24,36,66,129,129,66,36,24:SYMBOL 182,0,24,52,126,90,44,24,0:SYMB
OL 183,0,108,190,191,191,95,126,56:SYMBOL 184,28,62,
34,62,34,28,8,0:SYMBOL 185,0,0,0,65,34,28,42,54:SYMBOL 186,65,65,93,65,28,0,0,0:
SYMBOL 187,127,127,127,0,247,247,247,0
9220 TU$=CHR$(22)+CHR$(1):TD$=CHR$(22)+CHR$(0):A1$=CHR$(184):A2$=CHR$(185):A3$=C
HR$(186):LD$=CHR$(187)
9230 DIM O$(15):O$(1)=CHR$(176):O$(2)=CHR$(177):O$(3)=CHR$(178):O$(4)=CHR$(179):
O$(14)=CHR$(180):O$(5)=CHR$(181):O$(15)=CHR$(182):O$
(6)=CHR$(183)
9240 FOR Z=1 TO 10:NM$(Z)="AMSTRAD":PT(Z)=100:NEXT:RETURN
9300 PEN 5:PRINT O$(O):RETURN
9310 PEN 3:PRINT O$(O):RETURN
9320 PEN 11:PRINT O$(6):RETURN
9330 PEN 6:PRINT O$(3):RETURN
9340 PEN 8:PRINT O$(5);TU$:LOCATE XO,YO:PEN 10:PRINT O$(15);TD$:RETURN
9350 PEN 9:PRINT O$(4);TU$:LOCATE XO,YO:PEN 7:PRINT O$(14);TD$:RETURN
```

```
9500 LOCATE XA,YA:PRINT" ":LOCATE XA,YA-1:PRINT" ":RETURN
9550 PEN 4:LOCATE XA,YA:PRINT A1$:PEN 1:LOCATE XA,YA-1:PRINT A2$:PEN 13:LOCATE X
A,YA:PRINT TU$;A3$;TD$:RETURN
9600 INK 2,2,8:PEN 2:LOCATE XA,YA:PRINT A1$:LOCATE XA,YA-1:PRINT A2$:LOCATE XA,Y
A:PRINT TU$;A3$;TD$:FOR T=1 TO 100:SOUND 1,1000,1:SO
UND 2,10,1:SOUND 3,3000,1:NEXT
9610 IF SQ(1)<>4 THEN 9610
9620 INK 2,6:VD=VD-1:GOSUB 8300:FOR T=1 TO 1000:L$=INKEY$:NEXT:IF VD>0 THEN 110
ELSE 10000
10000 IF PT<PT(10) THEN 10100 ELSE FOR Z=1 TO 10:L$=INKEY$:NEXT:NM$="":PEN 1:CLS
:LOCATE 4,4:PRINT IN$;"TU NOMBRE?":FOR Z=1 TO 10
10010 L$=INKEY$:IF L$=CHR$(13) THEN Z=10:GOTO 10030
10020 IF L$="" THEN 10010 ELSE NM$=NM$+L$:LOCATE 5+Z,10:PRINT L$
10030 NEXT
10040 pt(10)=pt:nm$(10)=nm$
10050 FOR Z=1 TO 10:FOR ZZ=1 TO 9:IF PT(ZZ)>=PT(ZZ+1) THEN 10070
10060 K=PT(ZZ):PT(ZZ)=PT(ZZ+1):PT(ZZ+1)=K:K$=NM$(ZZ):NM$(ZZ)=NM$(ZZ+1):NM$(ZZ+1)
=K$
10070 NEXT:NEXT
10100 CLS:LOCATE 4,1:PRINT"PUNTUACIONES:":FOR Z=1 TO 10:PEN Z+1:LOCATE 1,Z*2+1:P
RINT NM$(Z):LOCATE 14,Z*2+1:PRINT USING"######";PT(Z
):NEXT
10110 PEN 12:LOCATE 3,23:PRINT"O OTRA PARTIDA":LOCATE 3,24:PRINT"P OTRO PROGRAMA
"

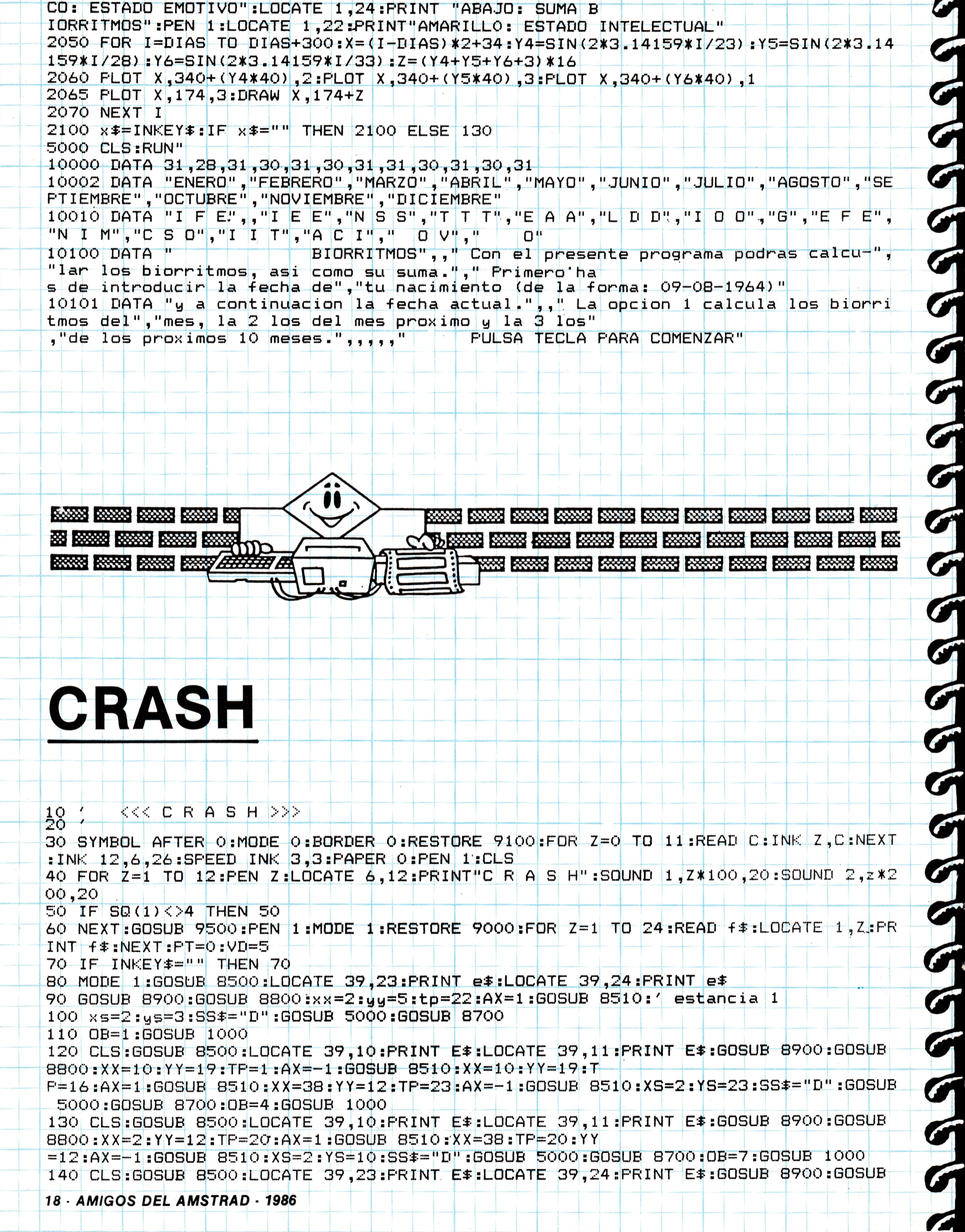
10120 L$=INKEY$:IF L$="" THEN 10120 ELSE L$=UPPER$(L$):IF L$="O" THEN MODE 1:PEN
 1:GOTO 50 ELSE IF L$<>"P" THEN 10120
10130 MODE 1:BORDER 1:SYMBOL AFTER 0:INK 0,1:INK 1,24:PAPER 0:PEN 1:CLS:PRINT"PR
EPARADO PARA EL SIGUIENTE PROGRAMA":RUN""
```



BIORRITMOS

```
2 INK 0,1:INK 1,24:INK 2,6:INK 3,26:PAPER 0:PEN 1:MODE 1
10 CLS:RESTORE 10100:FOR I=1 TO 16:READ X$:LOCATE 1,I:PRINT X$:NEXT I
12 X$=INKEY$:IF X$="" THEN 12 ELSE CLS
50 RESTORE 10000:DIM M(12),M$(11):FOR I=1 TO 12:READ X:M(I)=X:NEXT I:FOR I=0 TO
11:READ X$:M$(I)=X$:NEXT I
100 SYMBOL AFTER 220
102 SYMBOL 220,0,224,156,208,152,144,28,0
104 SYMBOL 221,0,224,156,200,136,136,28,0
106 SYMBOL 222,0,224,156,200,136,232,28,0
108 SYMBOL 223,224,128,220,144,248,80,80,224
110 MODE 1:INPUT"Fecha de nacimiento (xx-xx-xxxx):         ";n$
112 IF LEN(N$)<>10 THEN 110
114 DN=VAL(LEFT$(N$,2)):MN=VAL(MID$(N$,4,2)):AN=VAL(RIGHT$(N$,4))
116 INPUT"Fecha actual (xx-xx-xxxx):                ";a$
118 IF LEN(A$)<>10 THEN 116
120 da=VAL(LEFT$(a$,2)):Ma=VAL(MID$(a$,4,2)):Aa=VAL(RIGHT$(a$,4))
122 CLS:LOCATE 1,4:PRINT"FECHA DE NACIMIENTO: ";N$:LOCATE 1,7:PRINT"FECHA ACTUAL
: ";A$:LOCATE 10,10:PRINT"CONFORME (S/N)"
124 X$=INKEY$:IF X$="" THEN 124 ELSE IF X$="N" OR X$="n" THEN 110 ELSE IF X$="S"
 OR X$="s" THEN 130 ELSE 124
```

```
130 CLS:LOCATE 18,1:PRINT"MENU":LOCATE 2,6:PRINT"1:BIORRITMOS DEL MES":LOCATE 2,
8:PRINT"2:BIORRITMOS MES PROXIMO":LOCATE 2,10:PRINT"
3:BIORRITMOS LARGO ALCANCE":LOCATE 2,12:PRINT"4:CAMBIAR FECHAS":LOCATE 2,14:PRIN
T"5:FINALIZAR"
140 X$=INKEY$:IF X$="" THEN 140 ELSE IF X$="1" THEN 500 ELSE IF X$="2" THEN 550
ELSE IF X$="3" THEN 200 ELSE IF X$="4" THEN 110 ELSE
 IF X$="5" THEN 5000 ELSE 140
200 X1=AN:X2=MN:X3=DN:Y1=AA:Y2=MA:Y3=1:GOSUB 1000:GOTO 2000
400 CLS:LOCATE 1,10:PRINT"  Los graficos permaneceran en pantalla          hasta
que pulses tecla"
415 x$=INKEY$:IF x$="" THEN 415 ELSE RETURN
500 GOSUB 400:x1=an:x2=mn:x3=dn:y1=aa:y2=ma:y3=1:GOSUB 1000:GOTO 650
550 GOSUB 400:x1=an:x2=mn:x3=dn:y3=1:IF ma=12 THEN y1=aa+1:y2=1
552 IF ma<12 THEN y1=aa:y2=ma+1
554 GOSUB 1000:GOTO 650
600 CLS:RESTORE 10010:FOR i=1 TO 16:READ x$:LOCATE 35,i:PRINT x$:NEXT i
601 FOR i=1 TO 19:LOCATE 3,i:PRINT CHR$(149):NEXT i:n$=CHR$(154)+CHR$(154)+CHR$(
154)+CHR$(154)+CHR$(159):LOCATE 3,20:PRINT CHR$(147)
;n$;n$;n$;n$;n$;MID$(n$,1,3)
602 LOCATE 2,1:PRINT "1";CHR$(159):LOCATE 2,10:PRINT "0";CHR$(159):LOCATE 1,19:P
RINT "-1";CHR$(159):LOCATE 8,21:PRINT "5    10    15
  20    25":LOCATE 2,22:PRINT M$(Y2-1);Y1
604 IF Y2=2 AND Y1\4=Y1/4 THEN LOCATE 32,20:PRINT CHR$(154)
606 IF M(Y2)>=30 THEN LOCATE 32,20:PRINT MID$(N$,4,2):LOCATE 33,21:PRINT "30"
608 IF M(Y2)=31 THEN LOCATE 34,20:PRINT CHR$(154)
610 RETURN
650 GOSUB 600:ND=M(Y2):IF Y2=2 AND Y1/4=Y1\4 THEN ND=ND+1
655 FOR I=DIAS TO DIAS+ND-1:X=I-DIAS+4:Y4=9.7-9*SIN(2*3.14159*i/23):y5=9.7-9*SIN
(2*3.14159*i/28):y6=9.7-9*SIN(2*3.14159*i/33)
670 LOCATE x,y4:PRINT "F":LOCATE X,Y5:PRINT "E":LOCATE X,Y6:PRINT "I"
672 IF INT(Y4)=INT(Y5) THEN LOCATE X,Y5:PRINT CHR$(220)
674 IF INT(Y4)=INT(Y6) THEN LOCATE X,Y6:PRINT CHR$(221)
675 IF INT(Y5)=INT(Y6) THEN LOCATE X,Y6:PRINT CHR$(222)
677 IF INT(Y4)=INT(Y5) AND INT(Y4)=INT(Y6) THEN LOCATE X,Y5:PRINT CHR$(223)
679 NEXT I
700 x$=INKEY$:IF x$="" THEN 700 ELSE CLS:GOSUB 601
705 LOCATE 2,1:PRINT"3":LOCATE 1,19:PRINT"-3"
708 x$="SUMA DE BIORRITMOS":FOR I=2 TO 19:LOCATE 38,I:PRINT MID$(X$,I-1,1):NEXT
I
710 FOR I=DIAS TO DIAS+ND-1:X=I-DIAS+4:Y4=SIN(2*3.14159*i/23):y5=SIN(2*3.14159*i
/28):y6=SIN(2*3.14159*i/33)
712 PEN 2:Z=INT((Y4+Y5+Y6+3)*3):FOR J=19 TO 19-Z STEP -1:LOCATE X,J:PRINT CHR$(1
43):NEXT J:NEXT I:PEN 1
750 X$=INKEY$:IF X$="" THEN 750 ELSE 130
1000 DIAS=0:IF Y1-X1=1 THEN 1025 ELSE IF X1=Y1 THEN 1300
1005 FOR I=X1+1 TO Y1-1:DIAS=DIAS+365
1010 IF I/4=I\4 THEN DIAS=DIAS+1
1020 NEXT I
1025 IF X2=12 THEN 1055
1030 FOR I=X2+1 TO 12:DIAS=DIAS+M(I)
1040 IF I=2 AND X1/4=X1\4 THEN DIAS=DIAS+1
1050 NEXT I
1055 IF Y2=1 THEN 1090
1060 FOR I=1 TO Y2-1:DIAS=DIAS+1
1070 IF I=2 AND Y1/4=Y1\4 THEN DIAS=DIAS+1
1080 NEXT I
1090 DIAS=DIAS+M(X2)-X3:IF X2=2 AND X1/4=X1\4 THEN DIAS=DIAS+1
1200 DIAS=DIAS+Y3:RETURN
1300 FOR I=X2+1 TO Y2-1:DIAS=DIAS+M(I):IF I=2 AND X1/4=X1\4 THEN DIAS=DIAS+1
1305 NEXT i
1310 GOTO 1090
2000 GOSUB 400:CLS:PLOT 32,398,1:DRAW 32,170:DRAW 639,170:PLOT 32,340:DRAW 639,3
40
2002 LOCATE 2,1:PRINT"1":LOCATE 2,4:PRINT"0":LOCATE 1,7:PRINT"-1"
2005 m=38:j=ma-1:FOR i=0 TO 9:j=j+1:IF j=13 THEN j=1
2006 m=m+2*m(j):PLOT m,168:PLOT m,166:LOCATE m\16-3,16:PRINT j:NEXT i
2010 PEN 2:LOCATE 1,18:PRINT "ROJO: ESTADO FISICO":PEN 3:LOCATE 1,20:PRINT "BLAN
```



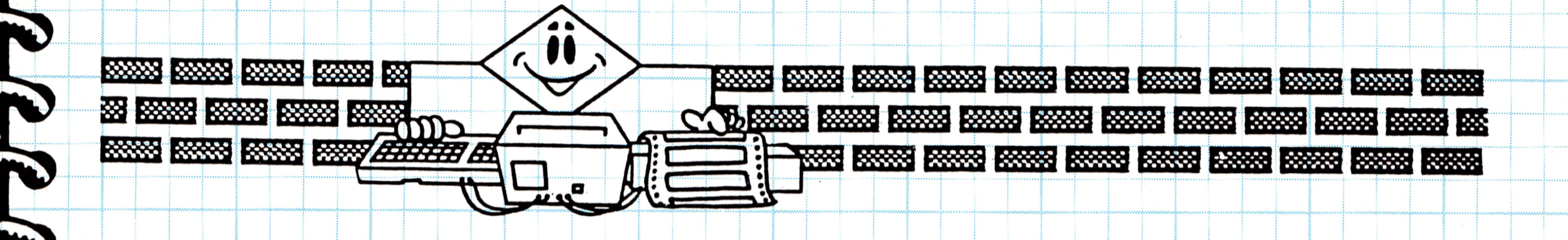
```
CO: ESTADO EMOTIVO":LOCATE 1,24:PRINT "ABAJO: SUMA B
IORRITMOS":PEN 1:LOCATE 1,22:PRINT"AMARILLO: ESTADO INTELECTUAL"
2050 FOR I=DIAS TO DIAS+300:X=(I-DIAS)*2+34:Y4=SIN(2*3.14159*I/23):Y5=SIN(2*3.14
159*I/28):Y6=SIN(2*3.14159*I/33):Z=(Y4+Y5+Y6+3)*16
2060 PLOT X,340+(Y4*40),2:PLOT X,340+(Y5*40),3:PLOT X,340+(Y6*40),1
2065 PLOT X,174,3:DRAW X,174+Z
2070 NEXT I
2100 x$=INKEY$:IF x$="" THEN 2100 ELSE 130
5000 CLS:RUN"
10000 DATA 31,28,31,30,31,30,31,31,30,31,30,31
10002 DATA "ENERO","FEBRERO","MARZO","ABRIL","MAYO","JUNIO","JULIO","AGOSTO","SE
PTIEMBRE","OCTUBRE","NOVIEMBRE","DICIEMBRE"
10010 DATA "I F E",,"I E E","N S S","T T T","E A A","L D D","I O O","G","E F E",
"N I M","C S O","I I T","A C I","  O V","     O"
10100 DATA "                BIORRITMOS",," Con el presente programa podras calcu-",
"lar los biorritmos, asi como su suma."," Primero'ha
s de introducir la fecha de","tu nacimiento (de la forma: 09-08-1964)"
10101 DATA "y a continuacion la fecha actual.",," La opcion 1 calcula los biorri
tmos del","mes, la 2 los del mes proximo y la 3 los"
,"de los proximos 10 meses.",,,,,"       PULSA TECLA PARA COMENZAR"
```

CRASH

```
10 '   <<< C R A S H >>>
20 '
30 SYMBOL AFTER 0:MODE 0:BORDER 0:RESTORE 9100:FOR Z=0 TO 11:READ C:INK Z,C:NEXT
:INK 12,6,26:SPEED INK 3,3:PAPER 0:PEN 1:CLS
40 FOR Z=1 TO 12:PEN Z:LOCATE 6,12:PRINT"C R A S H":SOUND 1,Z*100,20:SOUND 2,z*2
00,20
50 IF SQ(1)<>4 THEN 50
60 NEXT:GOSUB 9500:PEN 1:MODE 1:RESTORE 9000:FOR Z=1 TO 24:READ f$:LOCATE 1,Z:PR
INT f$:NEXT:PT=0:VD=5
70 IF INKEY$="" THEN 70
80 MODE 1:GOSUB 8500:LOCATE 39,23:PRINT e$:LOCATE 39,24:PRINT e$
90 GOSUB 8900:GOSUB 8800:xx=2:yy=5:tp=22:AX=1:GOSUB 8510:' estancia 1
100 xs=2:ys=3:SS$="D":GOSUB 5000:GOSUB 8700
110 OB=1:GOSUB 1000
120 CLS:GOSUB 8500:LOCATE 39,10:PRINT E$:LOCATE 39,11:PRINT E$:GOSUB 8900:GOSUB
8800:XX=10:YY=19:TP=1:AX=-1:GOSUB 8510:XX=10:YY=19:T
P=16:AX=1:GOSUB 8510:XX=38:YY=12:TP=23:AX=-1:GOSUB 8510:XS=2:YS=23:SS$="D":GOSUB
 5000:GOSUB 8700:OB=4:GOSUB 1000
130 CLS:GOSUB 8500:LOCATE 39,10:PRINT E$:LOCATE 39,11:PRINT E$:GOSUB 8900:GOSUB
8800:XX=2:YY=12:TP=20:AX=1:GOSUB 8510:XX=38:TP=20:YY
=12:AX=-1:GOSUB 8510:XS=2:YS=10:SS$="D":GOSUB 5000:GOSUB 8700:OB=7:GOSUB 1000
140 CLS:GOSUB 8500:LOCATE 39,23:PRINT E$:LOCATE 39,24:PRINT E$:GOSUB 8900:GOSUB
```

```
8800:XX=2:YY=12:TP=20:AX=1:GOSUB 8510:FOR Y=20 TO 24
:LOCATE 5,Y:PRINT STRING$(29,172):NEXT:XX=34:YY=20:TP=39:AX=1:GOSUB 8510
150 XS=2:YS=10:SS$="D":GOSUB 5000:GOSUB 8700:OB=10:GOSUB 1000
160 CLS:GOSUB 8500:LOCATE 39,23:PRINT E$:LOCATE 39,24:PRINT E$:GOSUB 8900:GOSUB
8800:FOR XX=4 TO 37:IF RND<0.5 THEN LOCATE XX,24:PRI
NT LD$
170 NEXT:XS=2:YS=23:SS$="D":GOSUB 5000:GOSUB 8700:OB=13:GOSUB 1000
180 CLS:GOSUB 8500:LOCATE 39,22:PRINT "F":LOCATE 39,23:PRINT "I":LOCATE 39,24:PR
INT"N":GOSUB 8900:GOSUB 8800:XX=20:YY=10:TP=5:AX=-1:
GOSUB 8510:XX=20:YY=10:TP=35:AX=1:GOSUB 8510:XS=2:YS=23:SS$="D":GOSUB 5000:GOSUB
 8700:OB=16:FI=1:GOSUB 1000
999 GOTO 999
1000 L$=INKEY$:IF L$<>"" THEN L$=UPPER$(L$):GOSUB 7000:ELSE 1200
1010 IF L$="Q" AND T2=1 AND T1=0 AND ES=0 THEN GOSUB 5100:XS=XS-1:SS$="I":GOSUB
5000:GOTO 1100
1020 IF L$="W" AND T4=1 AND T3=0 AND ES=0 THEN GOSUB 5100:XS=XS+1:SS$="D":GOSUB
5000:GOTO 1100
1030 IF L$="A" AND T2=0 AND T1=0 AND ES=0 THEN GOSUB 5100:XS=XS-1:YS=YS+1:SS$="I
":GOSUB 5000 ELSE IF L$="A" AND T1=1 AND T5=0 AND ES
=0 THEN GOSUB 5100:XS=XS-1:YS=YS-1:SS$="I":GOSUB 5000
1035 IF L$="A" THEN 1100
1040 IF L$="S" AND T4=0 AND T3=0 AND ES=0 THEN GOSUB 5100:XS=XS+1:YS=YS+1:SS$="D
":GOSUB 5000 ELSE IF L$="S" AND T3=1 AND T6=0 AND ES
=0 THEN GOSUB 5100:XS=XS+1:YS=YS-1:SS$="D":GOSUB 5000
1045 IF L$="S" THEN 1100
1050 IF L$="O" AND ES=0 THEN GOSUB 7200:PRINT CHR$(22);CHR$(1):PEN 2:FOR Y=YS-1
TO TES STEP -1:LOCATE XS,Y:PRINT ES$:SOUND 1,1000,1:
SOUND 2,1500,1:NEXT:PRINT CHR$(22);CHR$(0):PEN 1:ES=1
1055 IF QES=1 THEN QES=0:ES=0
1060 IF L$="P" AND YS>3 AND ES=1 THEN E$=ES$:GOSUB 5100:E$=CHR$(32):YS=YS-1:GOSU
B 5000 ELSE IF L$="P" THEN GOSUB 5100:GOSUB 7300:GOS
UB 5000:ES=0
1100 K=0:FOR Z=1 TO 7:IF XS=XP(Z) AND (YS=YP(Z) OR YS+1=YP(Z)) THEN K=Z:Z=9
1110 NEXT:IF K<>0 THEN LOCATE XP(K),YP(K):PRINT E$:GOSUB 5000:KP(K)=0:YP(K)=0:PT
=PT+100:GOSUB 8800
1120 IF K<>0 AND ES=1 THEN GOSUB 5100:GOSUB 7300:GOSUB 5000:ES=0
1150 IF XS=39 THEN 3000
1200 PEN 3:IF XO=0 THEN XO=INT(RND*37+2):YO=4:O=INT(RND(TIME)*3+OB):IF XO=XP(1)
OR XO=XP(2) OR XO=XP(3) OR XO=XP(4) OR XO=XP(5) OR X
O=XP(6) OR XO=XP(7) THEN XO=0:GOTO 1200 ELSE LOCATE XO,YO:PRINT O$(O)
1210 LOCATE XO,YO:PRINT E$:YO=YO+2:T=TEST(XO*16-8,400-(YO*16-12)):IF T=1 AND XO<
>XS OR YO>24 THEN XO=0:GOTO 1000
1220 LOCATE XO,YO:PRINT O$(O):IF XO=XS AND (YO=YS OR YO=YS+1) THEN 2000
1230 PEN 1:GOTO 1000
2000 FOR Z=500 TO 1000 STEP 10:SOUND 1,Z,2:SOUND 2,Z+100,2:NEXT
2005 IF SQ(1)<>4 THEN 2005
2010 SOUND 1,1000,5
2015 VD=VD-1:IF VD<1 THEN 2100
2020 LOCATE 26,1:PRINT STRING$(13,32):GOSUB 8900:GOSUB 5000:XO=0:GOTO 1000
2100 LOCATE 7,12:PRINT"SE TE TERMINARON LAS VIDAS":FOR Z=1 TO 3000:NEXT
2110 CLS:PEN 1:LOCATE 3,5:PRINT"HAS OBTENIDO";PT;"PUNTOS":LOCATE 3,10:PRINT"PARA
 OTRA PARTIDA PULSA LA TECLA P":LOCATE 3,12:PRINT"PA
RA OTRO PROGRAMA PULSA LA TECLA F"
2120 L$=INKEY$:IF L$="" THEN 2120 ELSE L$=UPPER$(L$):IF L$="P" THEN RUN ELSE IF
L$="F" THEN 10000
2130 GOTO 2110
3000 XO=0:INK 1,26,6:FOR Z=300 TO 10 STEP -10:SOUND 1,Z,2:SOUND 2,Z+10,2:NEXT:IN
K 1,26:PEN 3
3010 IF SQ(1)<>4 THEN 3010
3015 IF FI<>0 THEN 3500
3020 LOCATE 1,25:PRINT"PASAMOS A LA SIGUIENTE ESTANCIA (S/N)"
3030 L$=INKEY$:IF L$="" THEN 3030 ELSE L$=UPPER$(L$):IF L$="N" THEN LOCATE 1,25:
PEN 1:PRINT STRING$(39,172):GOTO 1000
3040 IF L$="S" THEN RETURN
3050 GOTO 3030
3500 LOCATE 12,25:PRINT"FIN DE LA AVENTURA":FOR T=1 TO 3000:NEXT:GOTO 2110
5000 LOCATE xs,ys:IF ss$="D" THEN PRINT SD1$ ELSE PRINT SI1$
```

```
5010 LOCATE XS,YS+1:IF SS$="D" THEN PRINT SD2$ ELSE PRINT SI2$
5020 RETURN
5100 PEN 2:LOCATE xs,ys:PRINT E$:LOCATE XS,YS+1:PRINT E$:SOUND 1,100,1:PEN 1:RET
URN
7000 TX=XS-1:TY=YS+1:GOSUB 7100:T1=T:TY=YS+2:GOSUB 7100:T2=T:TX=XS+1:GOSUB 7100:
T4=T:TY=YS+1:GOSUB 7100:T3=T:TY=YS:GOSUB 7100:T6=T:T
X=XS-1:GOSUB 7100:T5=T:RETURN
7100 T=TEST(TX*16-8,400-(TY*16-12)):RETURN
7200 K=0:FOR Z=1 TO 7:IF XS=XP(Z) THEN K=Z:Z=9
7210 NEXT:IF Z=8 THEN TES=3 ELSE TES=YP(K)+1
7230 IF YS-YP(K)=1 THEN LOCATE XP(K),YP(K):PRINT E$:XP(K)=0:YP(K)=0:QES=1:PT=PT+
100:GOSUB 8800
7240 RETURN
7300 FOR Y=3 TO 25:IF TEST(XS*16-8,400-(Y*16-12))=1 THEN J=Y:Y=99
7310 NEXT:YS=J-2:RETURN
8500 PEN 1:LOCATE 1,2:PRINT STRING$(39,172):LOCATE 1,25:PRINT STRING$(39,172):FO
R y=2 TO 25:LOCATE 1,y:PRINT ld$:LOCATE 39,y:PRINT l
d$:NEXT:RETURN
8510 FOR y=yy TO 24:LOCATE xx,y:PRINT ld$:NEXT:yy=yy+1:xx=xx+AX:IF xx<>tp THEN 8
510 ELSE RETURN
8700 FOR Z=1 TO 7
8710 XP=INT(RND*37+2.5):YP=INT(RND*21+3.5):IF TEST(XP*16-8,400-((YP+1)*16-12))<>
0 THEN 8710
8715 FOR Y=1 TO Z:IF XP=XP(Y) THEN Y=99
8717 NEXT:IF Y=100 THEN 8710
8720 PEN 2:LOCATE XP,YP:PRINT PR$:XP(Z)=XP:YP(Z)=YP:NEXT:PEN 1:RETURN
8800 PEN 3:SOUND 1,10,10,15:SOUND 2,100,10:LOCATE 10,1:PRINT USING"####";pt:PEN
1:RETURN
8900 PEN 3:LOCATE 3,1:PRINT"PUNTOS:":LOCATE 20,1:PRINT"VIDAS:":FOR Z=1 TO VD:LOC
ATE 26+Z*2,1:PRINT SI1$:NEXT:PEN 1:RETURN
9000 DATA "                    C R A S H",," Es un juego en el que hay que tener",ne
rvios de acero para sobrevivir.,," El juego esta di
vidido en 6 estancias",en las que debes recoger las perlas.," Como obstaculos t
endras todo tipo de"
9010 DATA objetos que caeran a gran velocidad,desde cualquier punto.," El movim
iento en horizontal se realiza",con las teclas Q (a
la izquierda) y W,(a la derecha); subir o bajar escalones,con las teclas A (a la
 izquierda) y S,(a la derecha).
9020 DATA" Para subir a por las perlas debes",tender una escalera con la tecla
O y,subir por ella con la tecla P.,," El juego term
ina si recorres todas las",estancias o acabas con tus cinco vidas.,"       QUE TE
NGAS MUCHA SUERTE!!!",
9030 DATA " PULSA CUALQUIER TECLA PARA COMENZAR"
9100 DATA 0,26,24,6,8,18,2,20,13,15,12,7
9500 SYMBOL 130,112,176,112,32,120,204,204,204:SYMBOL 131,220.120,48,48,48,48,11
2,240:SYMBOL 132,112,104,112,32,112,200,204,204:SYMB
OL 133,236,120,48,48,48,48,56,60:SI1$=CHR$(130):SI2$=CHR$(131):SD1$=CHR$(132):SD
2$=CHR$(133)
9510 SYMBOL 150,90,205,40,16,126,126,60,24:SYMBOL 151,149,149,86,100,126,126,60,
24:SYMBOL 152,36,90,36,36,126,126,60,24:SYMBOL 153,1
28,130,131,187,254,126,70,34:SYMBOL 154,0,0,0,58,127,127,168,112:SYMBOL 155,0,0,
0,0,48,123,255,72
9520 SYMBOL 156,0,0,0,255,255,126,60,60:SYMBOL 157,63,127,248,152,24,24,24,24:SY
MBOL 158,24,60,36,24,60,102,102,102:SYMBOL 159,1,1,5
7,69,255,137,249,255:SYMBOL 160,255,253,135,133,135,133,255,66:SYMBOL 161,0,0,25
5,171,213,171,213,255
9530 SYMBOL 162,0,0,0,0,0,3,252,112:SYMBOL 163,0,0,0,0,248,248,255,248:SYMBOL 16
4,254,127,127,126,60,60,126,126:SYMBOL 165,16,40,168
,254,239,40,40,16:SYMBOL 166,31,4,14,153,250,188,37,126:SYMBOL 167,60,126,126,12
6,36,36,24,24
9540 SYMBOL 170,147,84,165,40,139,100,33,149:EX$=CHR$(170):DIM O$(18):FOR Z=1 TO
 18:O$(Z)=CHR$(149+Z):NEXT
9550 SYMBOL 171,255,195,129,129,255,195,129,129:SYMBOL 172,127,127,127,0,247,247
,247,0:SYMBOL 173,66,36,24,231,24,36,66,0:es$=CHR$(1
71):ld$=CHR$(172):pr$=CHR$(173):e$=CHR$(32):RETURN
10000 BORDER 1:INK 0,1:PAPER 0:PEN 1:CLS:PRINT"PREPARADO PARA EL SIGUIENTE PROGR
AMA":RUN""
```



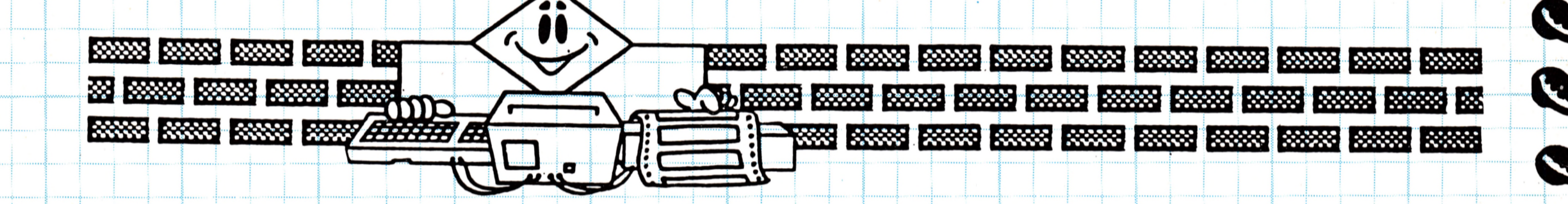
CIRCUITOS ELECTRICOS

```
10 '     << CIRCUITOS ELECTRICOS >>
20 ' COPYRIGHT M.J.C. & F.A.P. 1985.
30 BORDER 1:MODE 0:INK 0,1:INK 1,26,6:SPEED INK 5,5:INK 2,24:INK 3,6:PAPER 0:PEN
 1:CLS:LOCATE 6,8:PRINT"CIRCUITOS":LOCATE 5,14:PRINT
"ELECTRICOS":FOR T=1 TO 2000:NEXT:INK 1,26:MODE 1
40 GOSUB 9100:RESTORE 9000:FOR Z=1 TO 25:READ E$:LOCATE 1,Z:PRINT E$:SOUND 1,100
,2:NEXT:SOUND 1,200,5:GOSUB 9110
50 IF INKEY$="" THEN 50
60 MODE 0:INK 4,8:INK 5,18:INK 6,2:INK 7,20:INK 8,13:INK 9,15:INK 10,12:INK 11,7
:PEN 1:CLS
65 DIM A(24,2),C(25),E(25)
70 LOCATE 2,1:PRINT"CIRCUITO ELECTRICO"
80 PEN 2:FOR Y=3 TO 18 STEP 5:FOR X=2 TO 17:LOCATE X,Y:PRINT CH$:NEXT:NEXT
90 FOR X=2 TO 17 STEP 15:FOR Y=3 TO 18:LOCATE X,Y:PRINT CV$:NEXT:NEXT
100 PEN 9:CC=65:FOR Y=3 TO 18 STEP 5:FOR X=2 TO 17 STEP 5:LOCATE X,Y:PRINT CHR$(
CC):CC=CC+1:NEXT:NEXT
110 pl$="N":sl$="O":pl=78:sl=79
180 GOSUB 9200:GOSUB 2000:IF K=100 THEN 150 ELSE E(S)=5:NP=S:GOSUB 3000
190 LOCATE 1,24:INPUT"CUANTAS BOMBILLAS";NB
200 GOSUB 9200:IF NB<0 OR NB>12 OR NB<>INT(NB) THEN 190
210 GOSUB 9200
220 FOR Z=1 TO NB
230 LOCATE 1,24:INPUT"DESDE LETRA ";PL$:PL$=UPPER$(PL$):PL=ASC(PL$):IF PL<65 OR
PL>80 OR LEN(PL$)>1 THEN GOSUB 9200:GOTO 230
240 LOCATE 1,25:INPUT"HASTA LETRA ";SL$:SL$=UPPER$(SL$):SL=ASC(SL$):IF SL<65 OR
SL>80 OR LEN(SL$)>1 OR PL>SL THEN GOSUB 9200:GOTO 23
0
250 GOSUB 9200:GOSUB 2000:IF K=100 THEN 230 ELSE E(S)=1:GOSUB 3100:NEXT
260 LOCATE 1,24:INPUT"CUANTOS TIMBRES";NT
270 GOSUB 9200:IF NT<0 OR NT>12 OR NT<>INT(NT) THEN 260
280 GOSUB 9200
290 FOR Z=1 TO NT
300 LOCATE 1,24:INPUT"DESDE LETRA ";PL$:PL$=UPPER$(PL$):PL=ASC(PL$):IF PL<65 OR
PL>80 OR LEN(PL$)>1 THEN GOSUB 9200:GOTO 300
310 LOCATE 1,25:INPUT"HASTA LETRA ";SL$:SL$=UPPER$(SL$):SL=ASC(SL$):IF SL<65 OR
SL>80 OR LEN(SL$)>1 OR PL>SL THEN GOSUB 9200:GOTO 30
0
320 GOSUB 9200:GOSUB 2000:IF K=100 THEN 300 ELSE E(S)=2:GOSUB 3200:NEXT
330 LOCATE 1,24:PRINT"CUANTOS":INPUT"INTERRUPTORES";NI
340 GOSUB 9200:IF NI<0 OR NI>12 OR NI<>INT(NI) THEN 330
350 GOSUB 9200
360 FOR Z=1 TO NI
370 LOCATE 1,24:INPUT"DESDE LETRA ";PL$:PL$=UPPER$(PL$):PL=ASC(PL$):IF PL<65 OR
```

```
PL>80 OR LEN(PL$)>1 THEN GOSUB 9200:GOTO 370
380 LOCATE 1,25:INPUT"HASTA LETRA ";SL$:SL$=UPPER$(SL$):SL=ASC(SL$):IF SL<65 OR
SL>80 OR LEN(SL$)>1 OR PL>SL THEN GOSUB 9200:GOTO 37
0
390 GOSUB 9200:GOSUB 2000:IF K=100 THEN 370 ELSE E(S)=3:GOSUB 3300
400 NEXT:PEN 2:RESTORE 9400:FOR Y=3 TO 18 STEP 5:FOR X=2 TO 17 STEP 5:READ A:LOC
ATE X,Y:PRINT CHR$(A):NEXT:NEXT
410 GOSUB 2500
420 L$=INKEY$:IF L$="" THEN 420
430 L$=UPPER$(L$):SOUND 1,10,3
440 IF L$="A" THEN 10000
450 IF L$="O" THEN ERASE A,C,E:GOTO 60
460 IF L$="F" THEN 4000
470 IF L$="I" THEN 5000
480 GOTO 420
2000 IF PL<69 THEN R=64:YY=2 ELSE IF PL<73 THEN R=68:YY=7 ELSE IF PL<77 THEN R=7
2:YY=12 ELSE R=76:YY=17
2010 XX=(PL-R)*5-1:IF ABS(PL-SL)<>1 THEN XX=XX-2:YY=YY+3
2020 S=(XX+1)/5:IF YY=2 THEN S=S ELSE IF YY=7 THEN S=S+3 ELSE IF YY=12 THEN S=S+
6 ELSE IF YY=17 THEN S=S+9 ELSE 2040
2030 GOTO 2045
2040 S=(XX+3)/5+12:IF YY=10 THEN S=S+4 ELSE IF YY=15 THEN S=S+8
2045 IF S=14 OR S=15 OR S=18 OR S=19 OR S=22 OR S=23 THEN K=100:GOTO 2070
2050 K=0:IF A(S,1)<>0 AND A(S,2)<>0 THEN K=100
2060 IF K=100 THEN 2070 ELSE A(S,1)=XX:A(S,2)=YY
2070 RETURN
2500 PEN 2:LOCATE 1,21:PRINT"F PONER EN MARCHA":LOCATE 1,22:PRINT"I ABRIR/CERRAR
":LOCATE 3,23:PRINT"INTERRUPTORES":LOCATE 1,24:PRINT
"O OTRO CIRCUITO":LOCATE 1,25:PRINT"A ABANDONAR":RETURN
2510 FOR Z=20 TO 25:LOCATE 1,Z:PRINT STRING$(19,32):NEXT:RETURN
3000 SOUND 1,100,5:PEN 6:LOCATE A(S,1),A(S,2)+1:PRINT P1$:LOCATE A(S,1),A(S,2)+2
:PRINT P2$:PEN 1:RETURN
3045 IF S=14 OR S=15 OR S=18 OR S=19 OR S=22 OR S=23 THEN 2070
3100 PEN 8:LOCATE A(S,1),A(S,2):PRINT BA$:PEN 11:LOCATE A(S,1),A(S,2)+1:PRINT B$
:PEN 1:RETURN
3150 PEN 1:LOCATE A(S,1),A(S,2):PRINT BE$:PEN 11:LOCATE A(S,1),A(S,2)+1:PRINT B$
:PEN 1:RETURN
3200 PEN 4:LOCATE A(S,1),A(S,2):PRINT TA$:PEN 5:LOCATE A(S,1),A(S,2)+1:PRINT T$:
PEN 1:RETURN
3250 PEN 7:SOUND 1,10,1:LOCATE A(S,1),A(S,2):PRINT TE$:PEN 5:SOUND 1,10,1:LOCATE
 A(S,1),A(S,2)+1:PRINT T$:PEN 1:RETURN
3300 PEN 3:LOCATE A(S,1),A(S,2)+1:IF S<13 THEN PRINT IH$:LOCATE A(S,1)-1,A(S,2):
PRINT S ELSE PRINT IV$:LOCATE A(S,1)+1,A(S,2)+1:PRIN
T RIGHT$(STR$(S),ABS(S>9)+1)
3310 PEN 1:RETURN
3350 PEN 3:LOCATE A(S,1),A(S,2)+1:IF S<13 THEN PRINT CH$ ELSE PRINT CV$
3360 PEN 1:RETURN
4000 GOSUB 2510:LOCATE 1,24:PRINT"PULSA N PARA PARAR":LOCATE 5,25:PRINT"EL CIRCU
ITO"
4005 IF E(21)=3 OR E(10)=3 OR E(12)=3 OR E(24)=3 THEN RESTORE 9700:FOR Z=1 TO 18
:READ X:C(X)=0:NEXT:GOTO 4070
4010 IF E(17)=3 OR E(20)=3 THEN RESTORE 9710:FOR Z=1 TO 10:READ X:C(X)=0:NEXT:GO
TO 4030
4015 IF E(13)=3 OR E(1)=3 OR E(2)=3 OR E(3)=3 OR E(16)=3 THEN T=0 ELSE T=1
4017 RESTORE 9720:FOR Z=1 TO 5:READ X:C(X)=T:NEXT
4020 IF E(4)=3 OR E(5)=3 OR E(6)=3 THEN T=0 ELSE T=1
4022 FOR Z=4 TO 6:C(Z)=T:NEXT
4025 IF C(1)=0 AND C(4)=0 THEN T=0 ELSE T=1
4027 C(17)=T:C(20)=T
4030 IF E(7)=3 OR E(8)=3 OR E(9)=3 THEN T=0 ELSE T=1
4033 FOR Z=7 TO 9:C(Z)=T:NEXT
4040 IF C(17)=1 OR C(7)=1 THEN T=1 ELSE T=0
4050 RESTORE 9730:FOR Z=1 TO 4:READ X:C(X)=T:NEXT
4070 L$=INKEY$:IF L$="N" OR L$="n" THEN 4200
4080 RESTORE 9700:FOR Z=1 TO 18:READ S
4090 IF C(S)=0 THEN 4130
4100 IF E(S)=1 THEN GOSUB 3150
4120 IF E(S)=2 THEN GOSUB 3250:SOUND 1,100,5,15:GOSUB 3200
```

```
4130 NEXT
4140 GOTO 4070
4200 RESTORE 9700:FOR Z=1 TO 18:READ S:C(S)=0:IF E(S)=1 THEN GOSUB 3100 ELSE IF
E(S)=2 THEN GOSUB 3200
4210 NEXT:GOSUB 2510:GOSUB 2500:GOTO 420
5000 PEN 2:GOSUB 2510:LOCATE 1,24:INPUT"QUE INTERRUPTOR";IN:IF IN<0 OR IN>24 OR
IN<>INT(IN) THEN GOSUB 2500:GOTO 420
5010 S=IN:IF E(S)=3 THEN GOSUB 3350:E(S)=4 ELSE IF E(S)=4 THEN GOSUB 3300:E(S)=3

5020 GOSUB 9200:GOSUB 2500:GOTO 420
9000 DATA "        CIRCUITOS ELECTRICOS EN SERIE",,,,"  Con este programa podras di
se@ar,a tu","gusto, circuitos electricos en los que"
,se combinan distintos componentes como,"son: PILAS, BOMBILLAS, TIMBRES E",INTER
RUPTORES.
9010 DATA ,,"  Todos estos componentes podran ir",colocados en una parrilla con
24 posi-,ciones distintas.,,"  El objetivo del progr
ama es que por",medio del juego se puedan aprender las,bases del funcionamiento
de la electri-,cidad.
9020 DATA ,,"  Si quieres abandonar el programa a",medias pulsa la tecla A.,,"
 PULSA UNA TECLA PARA CONTINUAR"
9100 SYMBOL AFTER 32:SYMBOL 64,118,216,0,216,102,102,102,0:RETURN
9110 SYMBOL 190,7,24,35,36,34,17,9,9:SYMBOL 191,224,24,196,36,68,136,144,144:SYM
BOL 192,31,15,7,15,3,7,1,1:SYMBOL 193,248,240,224,24
0,192,224,128,128:SYMBOL 194,7,31,63,63,63,31,15,15:SYMBOL 195,224,184,220,220,2
20,184,240,240
9120 SYMBOL 196,7,7,7,7,7,7,15,15:SYMBOL 197,224,224,224,224,224,224,240,240:SYM
BOL 198,3,12,17,33,32,17,14,7:SYMBOL 199,240,56,204,
198,134,12,56,240:SYMBOL 200,35,76,147,162,160,145,78,39:SYMBOL 201,244,58,173,2
30,134,13,58,244
9130 SYMBOL 202,12,28,48,227,195,0,0,0:SYMBOL 203,24,24,192,192,96,48,24,24:SYMB
OL 204,0,0,0,232,208,32,127,125:SYMBOL 205,121,125,1
25,127,125,126,127,127:SYMBOL 206,0,64,32,23,11,4,254,62:SYMBOL 207,222,190,30,2
54,222,190,126,254
9140 B$=CHR$(192)+CHR$(193):BA$=CHR$(190)+CHR$(191):BE$=CHR$(194)+CHR$(195):T$=C
HR$(196)+CHR$(197):TA$=CHR$(198)+CHR$(199):TE$=CHR$(
200)+CHR$(201):IH$=CHR$(202):IV$=CHR$(203):P1$=CHR$(204)+CHR$(206): P2$=CHR$(205
)+CHR$(207):E$=CHR$(32):EE$=E$+E$
9150 CV$=CHR$(149):CH$=CHR$(154):VD$=CHR$(151):VI$=CHR$(157):HB$=CHR$(158):HS$=C
HR$(155):CR$=CHR$(159):SD$=CHR$(150):SI$=CHR$(156):B
I$=CHR$(153):BD$=CHR$(147):RETURN
9200 LOCATE 1,24:PRINT STRING$(20,32):LOCATE 1,25:PRINT STRING$(19,32):RETURN
9400 DATA 150,154,154,156,151,154,154,157,151,154,154,157,147,154,154,153
9700 DATA 1,2,3,4,5,6,7,8,9,10,11,12,13,16,17,20,21,24
9710 DATA 17,13,1,2,3,4,5,6,16,20
9720 DATA 13,1,2,3,16
9730 DATA 21,10,12,24
10000 MODE 1:PEN 1:CLS:SYMBOL AFTER 31:PRINT"PREPARADO PARA EL SIGUIENTE PROGRAM
A":RUN""
```

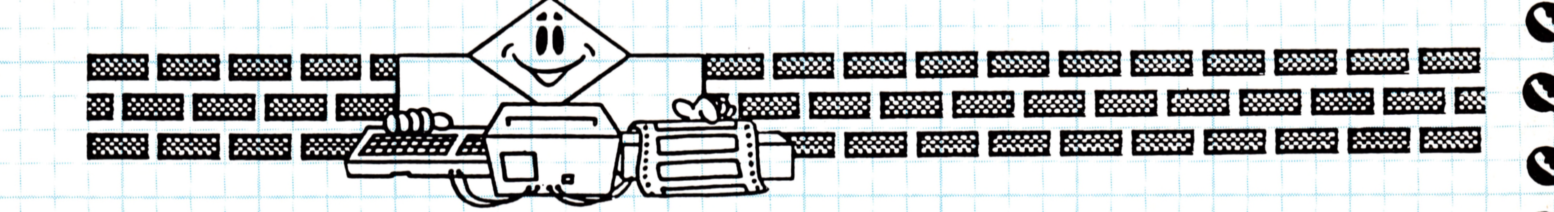


21

```
4 INK 0,1:INK 1,24:INK 2,6:INK 3,26:INK 6,18,6:PEN 1:PAPER 0:BORDER 1:CLS
5 ENV 1,10,4,3,8,-4,3,3,-1,10,6,5,2,4,-5,3
10 MODE 1:RESTORE 10100:FOR I=1 TO 17:READ X$:LOCATE 1,I:PRINT X$:NEXT I
12 X$=INKEY$:IF X$="" THEN 12
20 MODE 0:SYMBOL 250,255,255,240,248,220,206,199,195:SYMBOL 251,255,255,15,31,59
,115,227,195:SYMBOL 252,195,199,206,220,248,240,255,
255:SYMBOL 253,195,227,115,59,31,15,255,255
22 WINDOW #1,1,10,2,18:WINDOW #2,1,20,20,24:PAPER #1,0:WINDOW #3,13,20,14,19:PEN
 #1,1:PAPER #2,3:PEN #2,2:CLS#1:PAPER #3,0
100 CLS:INPUT "Cual es tu nombre ";n$
102 IF LEN(n$)>9 THEN 100 ELSE CLS
103 PEN 2:LOCATE 12,4:PRINT N$:LOCATE 12,6:PRINT 0:LOCATE 12,8:PRINT"AMSTRAD":LO
CATE 12,10:PRINT 0
104 su=0:x=RND:IF x<0.5 THEN am=0:GOTO 3000
106 am=1:GOTO 2000
200 SOUND 1,956,30,7,,,1:SOUND 1,38,40,6:IF cs=1 THEN RESTORE 8000
202 IF cs=2 THEN RESTORE 8002
204 IF cs=3 THEN RESTORE 8004
206 IF cs=4 THEN RESTORE 8006
208 IF cs=5 THEN RESTORE 8008
210 IF cs=6 THEN RESTORE 8010
211 FOR i=0 TO 5:READ x$:d$(i)=x$:NEXT i
212 LOCATE #1,2,2:PRINT #1,"SUMA:";su:LOCATE #1,2,4:PRINT #1,CHR$(250);:FOR i=1
TO 7:PRINT #1,CHR$(208);:NEXT i:PRINT #1,CHR$(251)
214 LOCATE #1,2,5:PRINT #1,CHR$(211);CHR$(205);"  ";d$(0);"  ";CHR$(204);CHR$(20
9)
216 LOCATE #1,2,6:PRINT #1,CHR$(211);" ";CHR$(205);"   ";CHR$(204);" ";CHR$(209)
218 LOCATE #1,2,7:PRINT #1,CHR$(211);"  ";CHR$(135);CHR$(131);CHR$(139);"  ";CHR
$(209)
220 LOCATE #1,2,8:PRINT #1,CHR$(211);d$(1);" ";CHR$(133);d$(2);CHR$(138);" ";d$(
3);CHR$(209)
222 LOCATE #1,2,9:PRINT #1,CHR$(211);"  ";CHR$(141);CHR$(140);CHR$(142);"  ";CHR
$(209)
224 LOCATE #1,2,10:PRINT #1,CHR$(211);" ";CHR$(204);"   ";CHR$(205);" ";CHR$(209
)
226 LOCATE #1,2,11:PRINT #1,CHR$(211);CHR$(204);"  ";d$(4);"  ";CHR$(205);CHR$(2
09)
228 LOCATE #1,2,12:PRINT #1,CHR$(252);:FOR i=1 TO 7:PRINT #1,CHR$(210);:NEXT i:P
```

```
RINT #1,CHR$(253)
230 LOCATE #1,5,15:PRINT #1,CHR$(150);CHR$(154);CHR$(156)
232 LOCATE #1,5,16:PRINT #1,CHR$(149);d$(5);CHR$(149)
234 LOCATE #1,5,17:PRINT #1,CHR$(147);CHR$(154);CHR$(153)
236 RETURN
300 CLS#2:LOCATE #2,4,3:PRINT#2,"COJO LA CARA:";CE:FOR I=1 TO 3000:NEXT I:RETURN
400 IF su<21 THEN GOTO 3000
410 IF su=21 THEN ga=ga+1:LOCATE 12,10:PRINT ga:x$="PERDISTE":GOTO 550
420 IF SU>21 THEN gu=gu+1:LOCATE 12,6:PRINT gu:x$="GANASTE":GOTO 550
500 IF su<21 THEN GOTO 2000
510 IF su>21 THEN ga=ga+1:LOCATE 12,10:PRINT ga:x$="PERDISTE":GOTO 550
520 IF SU=21 THEN gu=gu+1:LOCATE 12,6:PRINT gu:x$="GANASTE":GOTO 550
550 PEN #3,6:FOR I=1 TO 6:LOCATE #3,1,I:PRINT#3,X$:NEXT I:RESTORE 10000:FOR I=1
TO 16:READ J:SOUND 1,J,25,7,1,,1:NEXT I:FOR I=1 TO 1
500:NEXT
560 PEN #3,3:CLS #3:LOCATE #3,1,2:PRINT #3,"1:OTRA":LOCATE #3,1,5:PRINT #3,"2:FI
N"
562 D$=INKEY$:IF D$="1" THEN 570 ELSE IF D$="2" THEN 5000 ELSE 562
570 CLS #3:SU=0:IF AM=1 THEN AM=0:GOTO 2999
572 IF AM=0 THEN AM=1:GOTO 2000
600 CLS #2:IF CS=1 OR CS=6 THEN X$="2  3  4  5" ELSE IF CS=2 OR CS=5 THEN X$="1
 3  4  6" ELSE X$="1  2  5  6"
602 LOCATE#2,4,2:PRINT#2,"QUE CARA COJES":LOCATE#2,6,4:PRINT#2,X$
610 D$=INKEY$:IF D$="" THEN 610 ELSE IF D$<>MID$(X$,1,1) AND D$<>MID$(X$,4,1) AN
D D$<>MID$(X$,7,1) AND D$<>MID$(X$,10,1) THEN 610
612 ce=VAL(d$):RETURN
1000 IF cs=1 OR cs=6 THEN ce=2 ELSE ce=1
1004 RETURN
1010 IF cs=2 OR cs=5 THEN ce=1 ELSE ce=2
1014 RETURN
1020 IF cs=3 OR cs=4 THEN ce=1 ELSE ce=3
1024 RETURN
1030 IF cs=3 OR cs=4 THEN ce=2 ELSE ce=4
1034 RETURN
1040 IF cs=2 OR cs=5 THEN ce=2 ELSE ce=5
1044 RETURN
1050 IF cs=1 OR cs=6 THEN ce=3 ELSE ce=6
1054 RETURN
1060 IF cs=2 OR cs=5 THEN ce=3 ELSE ce=2
1064 RETURN
1070 IF cs=3 OR cs=4 THEN ce=1 ELSE ce=4
1074 RETURN
1080 IF cs=1 OR cs=6 THEN ce=2 ELSE ce=1
1084 RETURN
1090 IF cs=2 OR cs=5 THEN ce=1 ELSE ce=5
1094 RETURN
1100 IF cs=2 OR cs=5 THEN ce=3 ELSE ce=2
1104 RETURN
1110 IF cs=3 OR cs=4 THEN ce=1 ELSE ce=3
1114 RETURN
1120 IF cs=3 OR cs=4 THEN ce=1 ELSE ce=4
1124 RETURN
1130 IF cs=2 OR cs=5 THEN ce=1 ELSE ce=5
1134 RETURN
1140 IF cs=1 OR cs=6 THEN ce=3 ELSE ce=6
1144 RETURN
1150 IF cs=2 OR cs=5 THEN ce=3 ELSE ce=2
1154 RETURN
1160 IF cs=1 OR cs=2 THEN ce=4 ELSE ce=1
1164 RETURN
1170 IF cs=1 THEN ce=24 ELSE ce=1
1174 RETURN
1180 ce=1:RETURN
1190 ce=2:RETURN
2000 CLS #1:IF su<>0 THEN 2100
2010 x=RND:IF x>0.5 THEN ce=3 ELSE ce=4
2020 GOTO 2110
2100 ON SU GOSUB 1190,1180,1170,1160,1150,1140,1130,1120,1110,1100,1090,1080,107
```

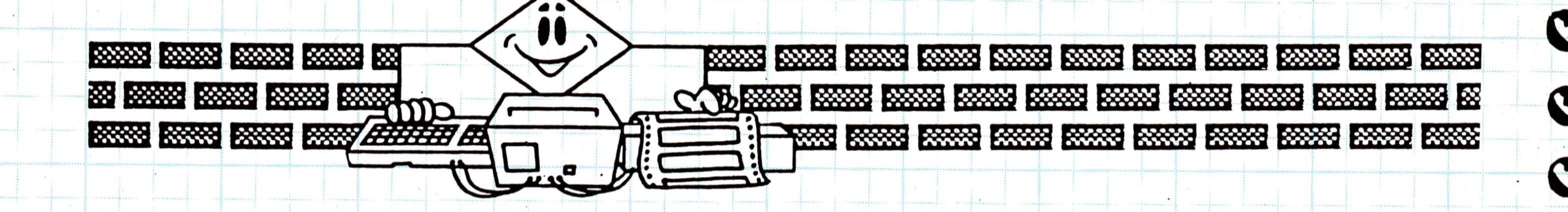
```
0,1060,1050,1040,1030,1020,1010,1000
2110 cs=ce:su=su+cs:GOSUB 200:GOSUB 300:GOTO 400
2999 CLS #1
3000 IF su<>0 THEN 3100
3010 CLS #2:LOCATE #2,4,2:PRINT#2,"QUE CARA COJES":LOCATE #2,3,4:PRINT #2,"1  2
 3  4  5  6"
3012 x$=INKEY$:IF x$<"1" OR x$>"6" THEN 3012 ELSE ce=VAL(x$):GOTO 3110
3100 GOSUB 600:CLS #1:CLS #2
3110 cs=ce:su=su+cs:GOSUB 200:FOR I=1 TO 2000:NEXT I:GOTO 500
5000 MODE 1:RUN"
8000 DATA "3","2","1","5","4","6"
8002 DATA "3","6","2","1","4","5"
8004 DATA "6","2","3","5","1","4"
8006 DATA "1","2","4","5","6","3"
8008 DATA "4","6","5","1","3","2"
8010 DATA "4","2","6","5","3","1"
10000 DATA 358,319,284,284,284,253,284,358,426,426,379,358,358,379,426,379
10100 DATA "                    DADO 21",," El objetivo del presente juego es sumar"
,"21 puntos con el dado que aparece en la","pantalla
, por turno se ha de ir voltean-","do el dado sobre una de las cuatro caras"
10101 DATA"laterales sumandose la nueva cara supe-","rior.",," El que logre suma
r 21 gana, el que se","pase de 21 pierde.",,,,,,"
   PULSA TECLA PARA COMENZAR"
```



TENIS

```
1 INK 0,1:INK 1,24:PEN 1:PAPER 0:BORDER 1:MODE 1
2 RESTORE 10000:FOR I=1 TO 16:READ X$:LOCATE 1,I:PRINT X$:NEXT I
4 X$=INKEY$:IF X$="" THEN 4 ELSE CLS
10 CLS:INPUT "Nombre del jugador 1 (max. 10 letras)   ";n$:IF LEN(n$)>10 THEN 10
12 CLS:INPUT "Nombre del jugador 2 (max. 10 letras)   ";m$:IF LEN(m$)>10 THEN 12
14 CLS:LOCATE 9,10:PRINT"NIVEL DE JUEGO (1 o 2)"
16 x$=INKEY$:IF x$="1" THEN nj=1 ELSE IF x$="2" THEN nj=2 ELSE 16
20 CLS:pn=0:pm=0:PX=10:PY=10:X1=6:Y1=11:X2=35:Y2=10:GOSUB 2000:GOTO 900
100 IF y<y1-2 OR y>y1+2 THEN RETURN ELSE IF (y=y1-2 AND iy=1) OR (y=y1+2 AND iy=
-1) THEN SOUND 1,100,5,7:ix=-ix:iy=-iy:RETURN
102 SOUND 1,100,5,7:ix=-ix:RETURN
110 IF y<y2-2 OR y>y2+2 THEN RETURN ELSE IF (y=y2-2 AND iy=1) OR (y=y2+2 AND iy=
-1) THEN SOUND 1,100,5,7:ix=-ix:iy=-iy:RETURN
112 SOUND 1,100,5,7:ix=-ix:RETURN
120 IF y<y1-1 OR y>y1+1 THEN RETURN ELSE IF (y=y1-1 AND iy=1) OR (y=y1+1 AND iy=
```

```
-1) THEN SOUND 1,100,5,7:ix=-ix:iy=-iy:x=px:y=py:RET
URN
122 SOUND 1,100,5,7:ix=-ix:x=px:y=py:RETURN
130 IF y<y2-1 OR y>y2+1 THEN RETURN ELSE IF (y=y2-1 AND iy=1) OR (y=y2+1 AND iy=
-1) THEN SOUND 1,100,5,7:ix=-ix:iy=-iy:x=px:y=py:RET
URN
132 SOUND 1,100,5,7:ix=-ix:x=px:y=py:RETURN
140 FOR I=-1 TO 1:LOCATE x1,y1+i:PRINT" ":NEXT i:FOR i=-1 TO 1:LOCATE xx,yy+i:PR
INT CHR$(138):NEXT i:x1=xx:y1=yy:RETURN
150 FOR I=-1 TO 1:LOCATE x2,y2+i:PRINT" ":NEXT i:FOR i=-1 TO 1:LOCATE xx,yy+i:PR
INT CHR$(133):NEXT i:x2=xx:y2=yy:RETURN
900 LOCATE PX,PY:PRINT" ":FOR i=6 TO 35:X$=INKEY$:LOCATE i,1:PRINT CHR$(143):LOC
ATE i,20:PRINT CHR$(143):NEXT i:xx=6:yy=11:GOSUB 140
:xx=35:yy=10:GOSUB 150
910 px=21:py=10:IY=1:Z=RND:IF Z<0.5 THEN iX=1 ELSE iX=-1
1000 WHILE (px<35 AND px>6)
1010 x=px+ix:y=py+iy:IF y=2 OR y=19 THEN iy=-iy:SOUND 1,150,5,7
1020 IF (x=x1+1 AND ix=-1) THEN GOSUB 100 ELSE IF (x=x1 AND ix=-1) THEN GOSUB 12
0
1030 IF (x=x2-1 AND ix=1) THEN GOSUB 110 ELSE IF (x=x2 AND ix=1) THEN GOSUB 130
1040 LOCATE px,py:PRINT" ":LOCATE x,y:PRINT CHR$(144):px=x:py=y
1060 x$=INKEY$:IF (x$="q" OR x$="Q") AND y1>3 THEN xx=x1:yy=y1-1:GOSUB 140
1065 IF x$="[" AND y2>3 THEN xx=x2:yy=y2-1:GOSUB 150
1070 IF (x$="a" OR x$="A") AND y1<18 THEN xx=x1:yy=y1+1:GOSUB 140
1075 IF x$="]" AND y2<18 THEN xx=x2:yy=y2+1:GOSUB 150
1077 IF nj=1 THEN GOTO 1200
1080 IF x$="\" AND x2<34 THEN xx=x2+1:yy=y2:GOSUB 150
1085 IF (x$="x" OR x$="X") AND x1<18 THEN xx=x1+1:yy=y1:GOSUB 140
1090 IF x$="/" AND x2>22 THEN xx=x2-1:yy=y2:GOSUB 150
1095 IF (x$="Z" OR x$="z") AND x1>7 THEN xx=x1-1:yy=y1:GOSUB 140
1200 X$=INKEY$:WEND
1300 IF PX>34 THEN PN=PN+1 ELSE PM=PM+1
1302 GOSUB 2000:GOTO 900
2000 LOCATE 6,22:PRINT n$;":";pn:LOCATE 6,24:PRINT m$;":";pm:LOCATE 9,1:PRINT"1:
PARTIDA      2:ABANDONAR"
2002 X$=INKEY$:IF X$="1" THEN RETURN ELSE IF X$="2" THEN 4000 ELSE 2002
4000 CLS:RUN"
10000 DATA "                TENIS",," Juego de tenis para dos jugadores, con","do
s niveles de juego, en el nivel 1, la","raqueta se m
ueve solo en sentido verti-","cal en el nivel 2, en sentido vertical y","horizon
tal."
10002 DATA" El jugador 1 esta a la izquierda y mue-","ve con Q,A (arriba y abajo
), Z,X (izq.","der.), y el jugador 2 esta a la derec
ha","y mueve con [,] (arriba y abajo), /,\","(izq. der.).",,,,"      PULSA TECLA
PARA CONTINUAR"
```



CHR-EDITOR

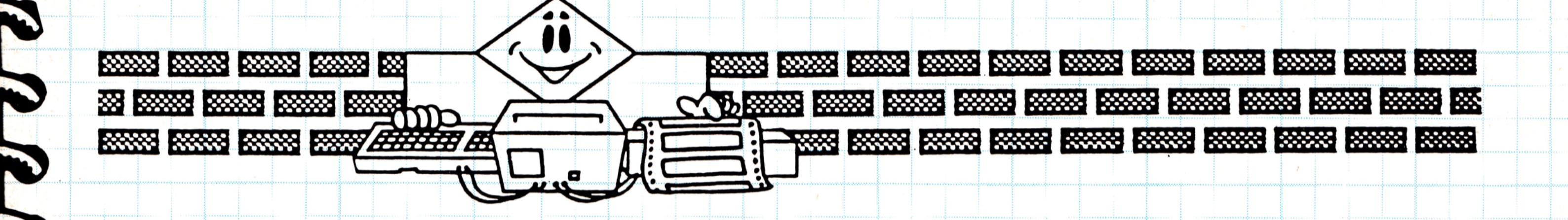
```
10 '   PROGRAMA   << CHR-EDITOR>>
          EDITOR DE CARACTERES

20 ' COPYRIGHT M.J.C. & F.A.P. 1985.
25 SYMBOL AFTER 31:NC=1:DIM A(100,8)
30 MODE 0:BORDER 1:INK 0,1:INK 1,26:INK 2,24:INK 3,8:PAPER 0:PEN 1:CLS
40 LOCATE 5,5:PRINT"CHR-EDITOR":PEN 3:LOCATE 7,12:PRINT"EDITOR":LOCATE 9,14:PRIN
T"DE":LOCATE 5,16:PRINT"CARACTERES"
50 FOR T=1 TO 2000 STEP 5:SOUND 1,T,1:SOUND 2,T+10,1:NEXT
60 MODE 1:INK 3,6:PEN 1:RESTORE 9000:FOR Z=1 TO 22:READ E$:LOCATE 1,Z:PRINT E$:S
OUND 1,200,2:NEXT:GOSUB 9200:GOSUB 8000
80 CLS:LOCATE 2,2:PRINT"DEFINICION DE LAS TECLAS DE MOVIMIENTO":LOCATE 5,10:PRIN
T"PARA SUBIR EL CURSOR?"
90 S$=INKEY$:IF S$="" THEN 90 ELSE LOCATE 1,4:PRINT"SUBIR ";S$
100 LOCATE 5,10:PRINT STRING$(30,32):LOCATE 5,10:PRINT"PARA BAJAR EL CURSOR?"
110 B$=INKEY$:IF B$="" THEN 110 ELSE LOCATE 20,4:PRINT"BAJAR ";B$
120 LOCATE 5,10:PRINT STRING$(30,32):LOCATE 1,10:PRINT"PARA LLEVAR A LA DERECHA
EL CURSOR?"
130 D$=INKEY$:IF D$="" THEN 130 ELSE LOCATE 1,6:PRINT"DERECHA ";D$
140 LOCATE 1,10:PRINT STRING$(39,32):LOCATE 1,10:PRINT"PARA LLEVAR A LA IZQUIERD
A EL CURSOR?"
150 I$=INKEY$:IF I$="" THEN 150 ELSE LOCATE 20,6:PRINT"IZQUIERDA ";I$
154 LOCATE 1,10:PRINT STRING$(39,32):LOCATE 5,10:PRINT"PARA FIJAR EL CURSOR?"
156 F$=INKEY$:IF F$="" THEN 156 ELSE LOCATE 10,8:PRINT"FIJAR CURSOR ";F$
160 LOCATE 1,10:PRINT STRING$(39,32):PRINT"ESTAS CONFORME CON ESTAS TECLAS (S/N)
"
170 L$=INKEY$:IF L$="" THEN 170 ELSE L$=UPPER$(L$):IF L$="N" THEN 80 ELSE IF L$<
>"S" THEN 170
180 PEN 1:CLS:LOCATE 7,1:PRINT"MENU DE OPCIONES:":RESTORE 9100:FOR Z=1 TO 9:READ
 E$:LOCATE 1,Z*2+2:PRINT Z;".- ";E$:NEXT:LOCATE 6,23
:PRINT"PULSA EL NUMERO DE LA OPCION":SOUND 1,100,7
190 L$=INKEY$:IF L$="" THEN 190 ELSE L=VAL(L$):IF L<1 OR L>9 THEN 190
200 CLS:ON L GOTO 300,300,300,300,300,3000,4000,5000,6000
210 GOTO 180
300 LN=1:AL=1:IF L=2 THEN LN=L ELSE IF L=3 THEN LN=L ELSE IF L=4 THEN LN=1:AL=2
ELSE IF L=5 THEN LN=2:AL=LN
305 H(0,0)=1:ERASE H:DIM H(AL*8,LN*8)
310 PEN 2:K=1:FOR Z=1 TO AL*8:LOCATE 1,Z+1
320 PRINT MID$(STR$(K),2,2):K=K+1:IF K=9 THEN K=1
330 NEXT
340 K=1:FOR Z=1 TO LN*8:LOCATE 1+Z,1
350 PRINT MID$(STR$(K),2,2):K=K+1:IF K=9 THEN K=1
360 NEXT
370 K$=STRING$(LN*8,144):FOR Z=1 TO AL*8:LOCATE 2,Z+1:PRINT K$:NEXT
375 IF S$=CHR$(240) AND B$=CHR$(241) AND D$=CHR$(243) AND I$=CHR$(242) THEN 390
380 LOCATE 33,3:PRINT S$:LOCATE 30,6:PRINT I$:LOCATE 36,6:PRINT D$:LOCATE 33,9:P
RINT B$
390 LOCATE 30,1:PRINT"TECLAS:":LOCATE 33,4:PRINT CHR$(240):LOCATE 31,6:PRINT CHR
```

```
$(242);"   ";CHR$(243):LOCATE 33,8:PRINT CHR$(241)
400 LOCATE 31,10:PRINT"FIJAR:":IF F$=CHR$(32) THEN LOCATE 30,11:PRINT "<SPACE>"
ELSE LOCATE 33,11:PRINT F$
405 LOCATE 28,13:PRINT"<ENTER> PARA":LOCATE 30,14:PRINT"TERMINAR"
410 INK 3,6,26:SPEED INK 3,3:H=1:V=1:PEN 3:LOCATE H+1,V+1:PRINT CHR$(143)
420 L$=INKEY$:IF L$=CHR$(13) THEN SOUND 1,100,5:GOTO 1500
430 IF L$=S$ AND V>1 THEN SOUND 1,50,1:GOTO 1000
440 IF L$=B$ AND V<AL*8 THEN SOUND 1,50,1:GOTO 1100
450 IF L$=D$ AND H<LN*8 THEN SOUND 1,50,1:GOTO 1200
460 IF L$=I$ AND H>1 THEN SOUND 1,50,1:GOTO 1300
470 IF L$=F$ THEN SOUND 1,300,3:GOTO 1400
480 GOTO 420
1000 GOSUB 2000:V=V-1:GOSUB 2100:GOTO 420
1100 GOSUB 2000:V=V+1:GOSUB 2100:GOTO 420
1200 GOSUB 2000:H=H+1:GOSUB 2100:GOTO 420
1300 GOSUB 2000:H=H-1:GOSUB 2100:GOTO 420
1400 IF H(V,H)=0 THEN H(V,H)=1 ELSE H(V,H)=0
1410 GOTO 420
1500 GOSUB 2000:XR=16:D(1)=1:ERASE D:DIM D(8)
1505 IF AL=2 THEN XR=18
1510 FOR Z=1 TO LN:FOR X=1 TO AL
1520 CK=3:GOSUB 1800
1530 PEN 2:LOCATE 1,24:PRINT STRING$(40,32):LOCATE 3,24:INPUT"N. DEL CARACTER QU
E TRANSFORMAMOS";T
1540 LOCATE 1,24:PRINT STRING$(40,32)
1550 IF T<33 THEN LOCATE 1,24:PRINT"CARACTER PROHIBIDO, ESTA RESERVADO":GOTO 157
0 ELSE IF T<>143 AND T<>144 THEN 1580
1560 IF T=143 OR T=144 THEN LOCATE 1,24:PRINT"CARACTER PROHIBIDO, ES ";CHR$(T) E
LSE 1580
1570 SOUND 1,1000,30:FOR T=1 TO 2000:NEXT:LOCATE 1,24:PRINT STRING$(40,32):GOTO
1530
1580 LOCATE 1,24:PRINT"ANTIGUO CARACTER: ";CHR$(T):LOCATE 9,25:PRINT"LO TRANSFOR
MAMOS (S/N)"
1590 L$=INKEY$:IF L$="" THEN 1590 ELSE L$=UPPER$(L$):IF L$="N" THEN LOCATE 1,24:
PRINT STRING$(40,32):LOCATE 1,25:PRINT STRING$(39,32
):GOTO 1530 ELSE IF L$<>"S" THEN 1590
1595 LOCATE 1,24:PRINT STRING$(40,32):LOCATE 1,25:PRINT STRING$(39,32)
1600 CC=0:FOR Y=X*8-7 TO X*8:SOUND 1,200,5:G$="":CC=CC+1:FOR I=Z*8-7 TO Z*8:SOUN
D 1,100,2:G$=G$+RIGHT$(STR$(H(Y,I)),1):NEXT:A(NC,CC)
=VAL("&X"+G$):D(CC)=A(NC,CC):NEXT
1610 A(NC,0)=T:NC=NC+1
1620 LOCATE 1,XR:PRINT T;":";:FOR I=2 TO 9:LOCATE I*4,XR:PRINT USING"###";A(NC-1
,I-1):NEXT
1625 CK=2:GOSUB 1800
1630 SYMBOL T,D(1),D(2),D(3),D(4),D(5),D(6),D(7),D(8):XR=XR+2:NEXT
1640 NEXT
1650 GOSUB 8000:GOTO 180
1800 PEN CK:K=1:FOR y=x*8-8 TO x*8:LOCATE 1,y+1:PRINT MID$(STR$(K),2,2):K=K+1:NE
XT
1810 K=1:FOR I=Z*8-8 TO Z*8:LOCATE 1+I,1:PRINT MID$(STR$(K),2,2):K=K+1:NEXT:RETU
RN
2000 LOCATE H+1,V+1:IF H(V,H)=0 THEN PEN 2:PRINT CHR$(144) ELSE PEN 1:PRINT CHR$
(143)
2010 RETURN
2100 PEN 3:LOCATE H+1,V+1:PRINT CHR$(143):PEN 2:RETURN
3000 PEN 1:LOCATE 5,1:PRINT"VER LOS CARACTERES":CC=24:CF=1
3010 LOCATE 1,22:PRINT"PARA VOLVER AL MENU PULSA M":LOCATE 1,23:PRINT"PARA VER O
TRO CARACTER PULSA O":LOCATE 1,24:PRINT"PARA CAMBIAR
 COLOR DEL CARACTER PULSA C":LOCATE 1,25:PRINT"PARA CAMBIAR COLOR DEL FONDO PULS
A F"
3020 LOCATE 3,20:INPUT"QUE CARACTER QUIERES VER";T
3030 LOCATE 3,20:PRINT STRING$(37,32):IF T<33 OR T>255 OR T<>INT(T) THEN 3020
3040 PEN 2:LOCATE 20,12:PRINT CHR$(T)
3050 L$=INKEY$:IF L$="" THEN 3050 ELSE L$=UPPER$(L$):IF L$="M" THEN GOSUB 3600:G
OTO 180 ELSE IF L$="O" THEN GOSUB 3600:CLS:GOTO 3000
 ELSE IF L$="C" THEN 3300 ELSE IF L$="F" THEN 3500 ELSE 3050
3300 CC=CC+1:IF CC>26 THEN CC=0 ELSE IF CC=CF THEN CC=CC+1:IF CC>26 THEN CC=0
3310 INK 2,CC:GOTO 3050
```

```
3500 CF=CF+1:IF CF>26 THEN CF=0 ELSE IF CC=CF THEN CF=CF+1:IF CF>26 THEN CF=0
3510 INK 0,CF:GOTO 3050
3600 INK 0,1:INK 2,24:RETURN
4000 IF NC>0 THEN PRINT"PREPARA EL CASSETTE PARA ALMACENAR TODOSLOS CARACTERES Q
UE HAS DEFINIDO" ELSE GOTO 180
4010 PRINT:PRINT:SPEED WRITE 1:PRINT"NOMBRE DEL ARCHIVO":PRINT"(maximo 10 caract
eres)":PRINT:PRINT:INPUT N$:IF LEN(N$)>10 THEN CLS:G
OTO 4010
4015 CLS:LOCATE 2,12:PRINT"ALMACENANDO";NC-1;"CARACTERES DEFINIDOS"
4020 OPENOUT N$
4030 PRINT#9,NC
4040 FOR Z=1 TO NC-1:FOR X=0 TO 8
4050 PRINT#9,A(Z,X)
4060 NEXT:NEXT
4070 CLOSEOUT
4080 CLS:LOCATE 9,12:PRINT"CARACTERES ALMACENADOS":GOSUB 8000:GOTO 180
5000 PRINT"CARGA DESDE EL CASSETTE DE CARACTERES   DEFINIDOS":PRINT:PRINT
5010 OPENIN ""
5020 INPUT#9,NC
5030 A(1,1)=1:D(1)=1:ERASE A,D:DIM A(100,8),D(8)
5040 FOR Z=1 TO NC-1:FOR X=0 TO 8
5050 INPUT#9,A(Z,X):D(X)=A(Z,X)
5060 NEXT:SYMBOL D(0),D(1),D(2),D(3),D(4),D(5),D(6),D(7),D(8):NEXT
5070 CLOSEIN
5080 CLS:LOCATE 1,12:PRINT NC-1;"CARACTERES CARGADOS DESDE CASSETTE":GOSUB 8000:
GOTO 180
6000 SYMBOL AFTER 31:MODE 1:INK 0,1:INK 1,24:PAPER 0:PEN 1:CLS:PRINT"PREPARADO P
ARA EL SIGUIENTE PROGRAMA":RUN""
8000 LOCATE 2,25:PRINT"PULSA CUALQUIER TECLA PARA CONTINUAR"
8010 IF INKEY$="" THEN 8010
8020 RETURN
9000 DATA


        "E D I T O R   D E   C A R A C T E R E S","==========================
============",," Este programa permite la definicio
n de",nuevos caracteres no existentes en la,serie de caracteres graficos que inc
or-,pora el AMSTRAD.,
9010 DATA "  Podras, de esta forma, definir figuras","ineditas para tus dibujos,
 graficas y",juegos.,,"  El caracter recien definido
 podras",asignarlo a cualquiera de los existentes,"(desde el 33 al 255), de form
a que"
9020 DATA debes tener cuidado con ciertos numeros,(ver manual AMSTRAD Apendice I
II p 2-13),,"  Los caracteres que puedes crear seran
",todos de 8 x 8 puntos pero con el pro-,grama puedes definir figuras formadas,p
or mas de un caracter.
9100 DATA DEFINIR CARACTER 1 x 1,DEFINIR CARACTERES 2 x 1,DEFINIR CARACTERES 3 x
 1,DEFINIR CARACTERES 1 x 2,DEFINIR CARACTERES 2 x 2
,VER CARACTERES,ALMACENAR CARACTERES EN CASSETTE,CARGAR CARACTERES DESDE CASSETT
E,FIN DEL PROGRAMA
9200 SYMBOL 144,255,129,129,129,129,129,129,255:RETURN
```

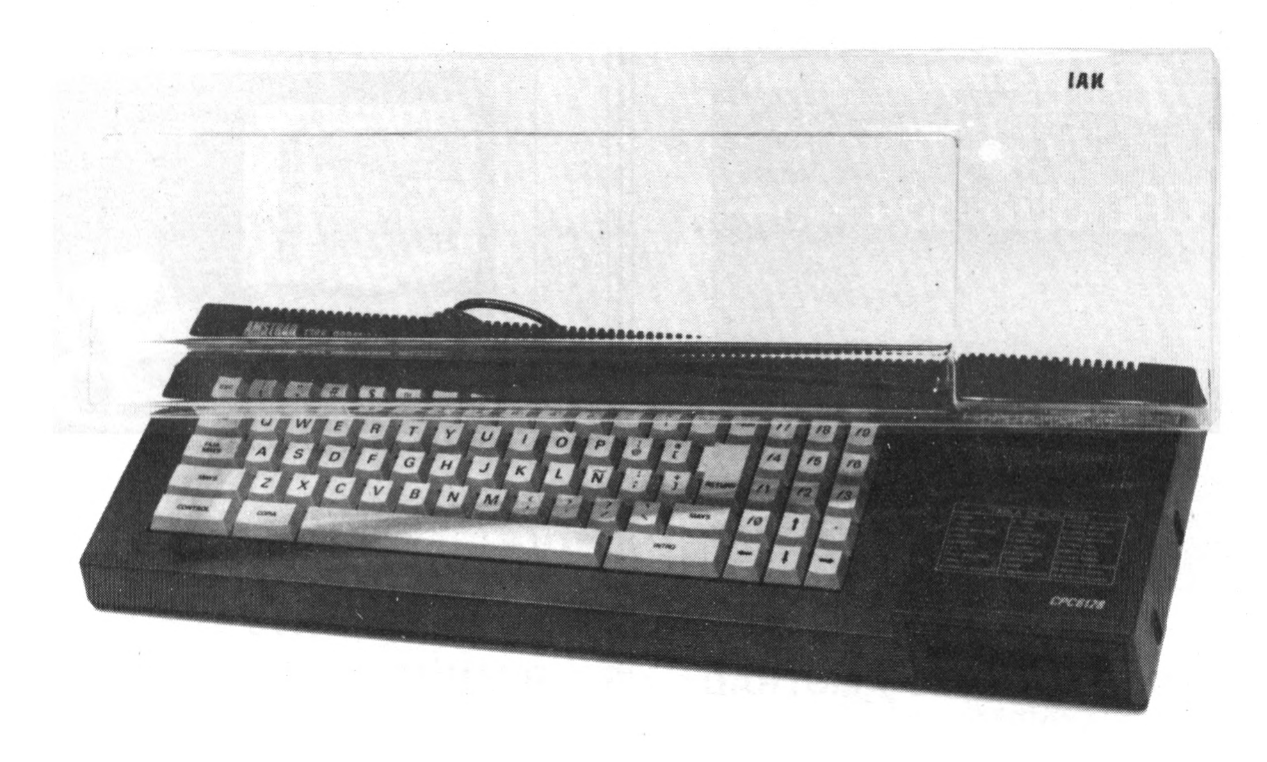


SUBMARINO

```
10 '  <<<  S U B M A R I N O >>>
20 '
30 SYMBOL AFTER 0:MODE 1:BORDER 11:INK 0,11:INK 1,24:INK 2,6:INK 3,1:PAPER 0:PEN
 1:CLS:RESTORE 9000:FOR Z=1 TO 25:READ E$:LOCATE 1,Z
:PRINT E$:SOUND 1,100,3:NEXT:GOSUB 9500
40 IF INKEY$="" THEN 40
50 MODE 1:BORDER 1:WINDOW #0,1,40,12,25:PAPER #0,3:PEN #0,1:WINDOW #1,1,40,2,11:
PAPER #1,0:PEN #1,2:WINDOW #2,1,40,1,1:PAPER #2,3:PE
N #2,2:CLS #0:CLS #1:CLS #2
60 NS=5:NT=10:TT=0:NB=TT:TB=TT:GOSUB 8000:GOSUB 8010:GOSUB 8020:YB=10
70 X=20:Y=11:GOSUB 5010:XMN=2:YMN=XMN:DXMN=1:DYMN=DXMN:GOSUB 5020
80 L$=INKEY$:IF L$<>"" THEN L$=UPPER$(L$)
90 IF L$="F" THEN 10000
100 IF L$="Q" AND X>1 THEN GOSUB 5000:X=X-1
110 IF L$="W" AND X<40 THEN GOSUB 5000:X=X+1
115 GOSUB 5010:GOSUB 5200
120 IF L$=CHR$(32) AND TP=0 THEN TP=1:XTP=X:YTP=Y-1:NT=NT-1:GOSUB 8010:TT=TT+1
125 IF TP=0 AND NT=0 THEN 7100
130 GOSUB 5020:IF XMN=X AND (YMN=Y OR YMN=Y+1) THEN 6000
140 IF TP=1 THEN GOSUB 5100
200 GOTO 80
999 GOTO 999
5000 LOCATE#0,X,Y:PRINT E$:LOCATE#0,X,Y+1:PRINT E$:RETURN
5010 LOCATE#0,X,Y:PRINT SB1$:LOCATE#0,X,Y+1:PRINT SB2$:RETURN
5020 PEN#0,2:LOCATE #0,XMN,YMN:PRINT E$:IF XMN>1 AND XMN<40 THEN XMN=XMN+DXMN EL
SE DXMN=-DXMN:XMN=XMN+DXMN
5030 IF YMN>1 AND YMN<13 THEN YMN=YMN+DYMN ELSE DYMN=-DYMN:YMN=YMN+DYMN
5040 LOCATE#0,XMN,YMN:PRINT#0,MN$:PEN#0,1:RETURN
5050 LOCATE#1,XB,YB:PRINT B$(BB):RETURN
5100 LOCATE#0,XTP,YTP:PRINT#0,E$:SOUND 1,10,2:IF YTP>1 THEN YTP=YTP-1:LOCATE#0,X
TP,YTP:PRINT#0,TP$:RETURN
5110 TP=0:IF XTP>=XB AND XTP<XB+LB THEN 5120 ELSE RETURN
5120 VOL=15:FOR Z=2000 TO 1950 STEP -1:LOCATE#1,XTP,YB:PRINT#1,EX1$:LOCATE#1,XTP
,YB:PRINT#1,EX2$:SOUND 1,Z,3,VOL:SOUND 2,Z+1000,3,VO
L:VOL=VOL-0.13:NEXT:NB=NB+1:GOSUB 8020:NT=NT+4-LB:GOSUB 8010
5130 LOCATE#1,XB,YB:PRINT#1,STRING$(3,32):XB=0:RETURN
5200 IF XB<2 THEN LOCATE#1,1,YB:PRINT#1,STRING$(3,32):BB=INT(RND*6+1):LB=LEN(B$(
BB))-1:XB=40-LB:TB=TB+1
5210 XB=XB-1:LOCATE#1,XB,YB:PRINT#1,B$(BB):RETURN
6000 PEN#0,2:VOL=15:FOR Z=3000 TO 2950 STEP -1:LOCATE#0,XMN,YMN:PRINT#0,EX1$:LOC
ATE#0,XMN,YMN:PRINT#0,EX2$:SOUND 1,Z,3,VOL:SOUND 2,Z
+1000,3,VOL:VOL=VOL-0.13:NEXT:PEN#0,1:NS=NS-1:GOSUB 8000:IF NS=0 THEN 7000 ELSE
80
7000 LOCATE#0,1,1:PRINT#0,"TU FLOTA DE SUBMARINOS HA SIDO DESTRUIDA":GOTO 7500
7100 LOCATE#0,1,1:PRINT#0,"TE QUEDASTE SIN TORPEDOS, HAS PERDIDO!!!":GOTO 7500
7500 FOR T=1 TO 3000:NEXT:MODE 1:CLS:LOCATE 5,6:PRINT"PUNTUACION:":LOCATE 2,8:PR
INT"N. TOTAL DE TORPEDOS DISPARADOS:";TT:LOCATE 2,10
:PRINT"N. TOTAL DE BARCOS ENEMIGOS:";TB:LOCATE 2,12:PRINT"N. BARCOS ENEMIGOS HUN
DIDOS:";NB
7510 LOCATE 1,14:PRINT"HAS HUNDIDO EL";INT(NB*100/TB);"% DE LA FLOTA ENEMIGA":LO
```

```
CATE 7,22:PRINT"PARA OTRA PARTIDA PULSA P":LOCATE 7,
24:PRINT"PARA OTRO PROGRAMA PULSA O"
7520 L$=INKEY$:IF L$="" THEN 7520 ELSE L$=UPPER$(L$)
7530 IF L$="P" THEN RUN ELSE IF L$="O" THEN 10000 ELSE 7520
8000 LOCATE #2,2,1:PRINT#2,"N. ";NS$;":":LOCATE #2,8,1:PRINT#2,USING"##";NS:RETU
RN
8010 LOCATE #2,13,1:PRINT#2,"N. ";TP$;":":LOCATE #2,18,1:PRINT#2,USING"###";NT:R
ETURN
8020 LOCATE #2,25,1:PRINT#2,B$(4);"HUNDIDOS:":LOCATE #2,36,1:PRINT#2,USING"###";
NB:RETURN
9000 DATA "      <<<  S U B M A R I N O  >>>",," Eres el Capitan de un submarino
 en","guerra, y por lo tanto tu mision es",hundir el
 maximo numero posible de,barcos enemigos.,," Te bastara un solo toroedo para h
undir"
9010 DATA a cualquiera de tus enemigos y por cada,uno que hundas recibiras mas t
orpedos.,," El enemigo estara defendido por medio",
de una terrible mina submarina.,," El movimiento del submarino se realiza"
9020 DATA con las teclas Q (a la izquierda) y,"W a la derecha), el torpedo se di
spara",pulsando la barra espaciadora.,," El juego t
ermina al ser hundido cinco","veces, al acabarse los torpedos o al",pulsar la te
cla F.
9030 DATA ," PULSA UNA TECLA PARA COMENZAR EL JUEGO"
9500 SYMBOL 170,16,56,124,124,254,254,238,198:SYMBOL 171,198,198,238,254,124,124
,56,40:SYMBOL 172,0,0,2,78,83,255,127,62:SYMBOL 173,
0,0,0,0,8,28,254,127:SYMBOL 174,0,7,116,55,255,127,63,31:SYMBOL 175,64,192,39,24
6,255,255,254,252
9510 SYMBOL 176,0,0,73,73,255,127,63,31:SYMBOL 177,32,60,34,62,255,255,254,252:S
YMBOL 178,0,0,238,102,255,127,63,31:SYMBOL 179,0,127
,170,213,255,255,255,255:SYMBOL 180,48,248,172,84,255,255,254,252
9520 SYMBOL 181,4,60,20,255,63,31,15,7:SYMBOL 182,16,241,83,255,255,255,255,255:
SYMBOL 183,240,168,84,255,252,252,248,240
9530 SYMBOL 186,16,56,56,56,56,16,56,40:SYMBOL 187,36,60,235,86,106,215,60,36:SY
MBOL 188,133,80,132,41,134,53,74,149:SYMBOL 189,34,2
0,165,66,165,153,74,36:E$=CHR$(32):SB1$=CHR$(170):SB2$=CHR$(171):TP$=CHR$(186):M
N$=CHR$(187)
9540 EX1$=CHR$(188):EX2$=CHR$(189):B$(1)=CHR$(172)+E$:B$(2)=CHR$(173)+E$:B$(3)=C
HR$(174)+CHR$(175)+E$:B$(4)=CHR$(176)+CHR$(177)+E$:S
YMBOL 190,1,0,3,63,127,255,127,63:SYMBOL 191,192,192,224,248,253,254,254,253
9550 B$(5)=CHR$(178)+CHR$(179)+CHR$(180)+E$:B$(6)=CHR$(181)+CHR$(182)+CHR$(183)+
E$:NS$=CHR$(190)+CHR$(191):RETURN
10000 MODE 1:CLS:PRINT"PREPARADO PARA EL SIGUIENTE PROGRAMA:":RUN""
```

IAN KEY-COVER

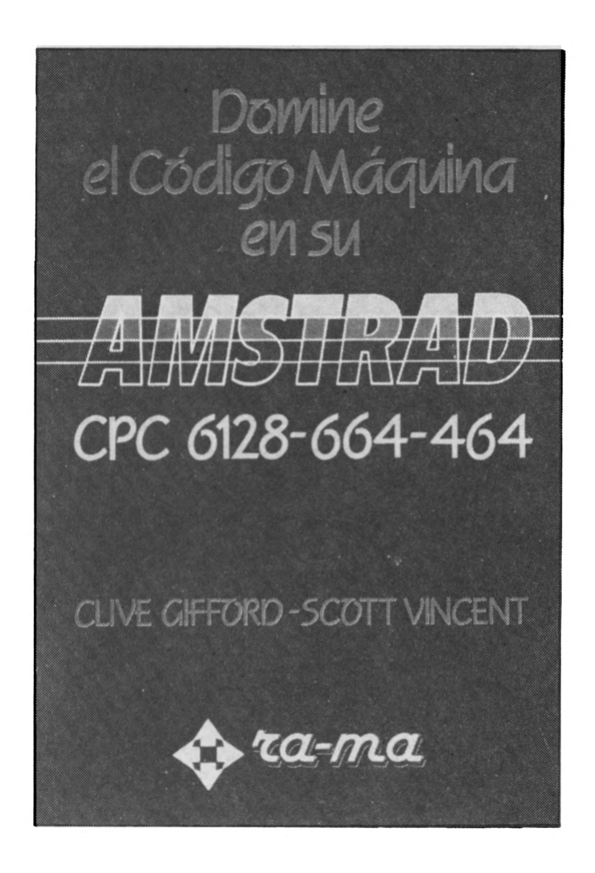




IAN KEY-COVER, ES EL PROTECTOR IDEAL PARA EL TECLADO DE SU AMSTRAD 6128 ESPECIALMENTE DISEÑADO PARA REUNIR TODAS LAS CARACTERISTICAS ADECUADAS PARA ELLO:

- PROTECCION FIRME DEL TECLADO DEL CPC 6128 (REALIZADO CON RESISTENTE METACRILATO DE UNA SOLA PIEZA CON NERVIOS LATERALES PARA FIJACION EN EL REBORDE DEL CONJUNTO DE SU ORDENADOR).
- AJUSTE PERFECTO EN SU ORDENADOR CON SUAVE PRECISION Y COBERTURA TOTAL.
- TRANSPARENTE (CONFIRIENDOLE LA PROPIEDAD DE VISUALIZAR EN TODO MOMENTO SU TECLADO).
- PROTECCION CONTINUA CONTRA ELEMENTOS EXTERNOS (COMO: DERRAMES DE LIQUIDOS, GOLPES, ETC.) ADEMAS DE GOZAR DE LA SEGURIDAD DEL BUEN FUNCIONAMIENTO DE SU ORDENADOR AL REANUDAR SU DIARIO QUEHACER. UN POCO DE CAFE DERRAMADO SOBRE SU TECLADO ELEVARA ENORMEMENTE EL PRESUPUESTO ANUAL DE SU ORDENADOR. EVITE EL RIESGO, PROTEJASE.
- RESGUARDO PERMANENTE CONTRA EL POLVO Y LA POLUCION (EL 50 % DE LAS AVERIAS DE SU TECLADO SON MOTIVADOS POR EL CONTACTO CONSTANTE DE ESTE CON EL POLVO Y LAS PARTICULAS ATMOSFERICAS, EL EXCESO DE HUMEDAD, ETC.). ELIMINE UN RIESGO CONTINUO, DOSIFIQUELO.
- MANTENGALO LIMPIO SU AMSTRAD 6128, CUBRIENDOLO CON IAN KEY-COVER.
- DELE AL TECLADO DE SU AMSTRAD 6128 ESA SENSACION DE PULCRITUD, SENTIDO DEL ORDEN Y APARIENCIA EXTERNA QUE SU AREA DE TRABAJO, ESTUDIO O ENSEÑANZA, REQUIERE.

BIBLIOGRAFIA





EL DOMINIO DEL AMSTRAD PCW 8256/8512

"El dominio del Amstrad PCW 8256/8512" le sitúa en la vía rápida hacia el éxito en los negocios. Lo mismo si está Vd. empezando a utilizar uno de estos ordenadores, como si está considerando comprárselo, este libro le mostrará rápidamente cómo rentabilizar al máximo su inversión.

Una gran parte del libro trata del proceso de texto.

Esta parte del libro es un medio didáctico excelente, que le conducirá desde los usos más sencillos del proceso de textos, a los más avanzados. Una sección aparte cubre el uso de NewWord, la potente alternativa de NewStarSoftware.

DOMINE EL CODIGO MAQUINA EN SU AMSTRAD

Ahora tiene la oportunidad de aprender a programar en código máquina en su ordenador Amstrad. Clive y Scott —dos programadores muy competentes, con gran experiencia en libros y software a sus espaldas— son los guías ideales para ayudarle a comprender las interioridades de la programación en código máquina del Amstrad.

Debe ir trabajando en código máquina del Amstrad.

Debe ir trabajando a lo largo del libro, saltándose las secciones que le presentan una especial dificultad la primera vez que las lea. Cuando haya terminado su primera lectura, tendrá los suficientes conocimientos como para poder comprender aquellas secciones que dejó sin completar la primera vez que pasó por ellas.

AMIGOS DEL AMSTRAD

EDITORIAL

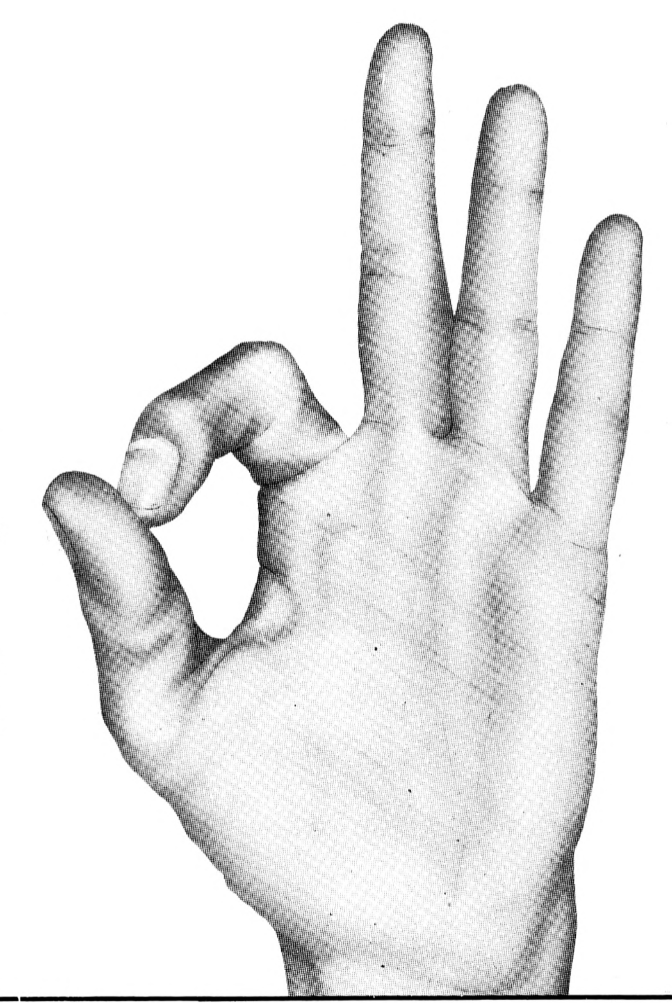
Tras un breve lapsus de tiempo, aquí estamos de nuevo con nuevos e interesantes programas para todos aquellos "AMIGOS DEL AMSTRAD".

Ante todo, comenzar agradeciendo el cariño con el que hemos sido recibidos por todos vosotros, y aunque se haya dicho muchas veces esto nos obliga a superarnos en ofrecer lo mejor cada mes.

En este ya nuestro número 2, os ofrecemos una serie de programas listados con mayor o menor dificultad, en los cuales podéis introducir una serie de cambios y mejoras, dejando de esta forma campo abierto a vuestra imaginación y vuestros conocimientos del ordenador.

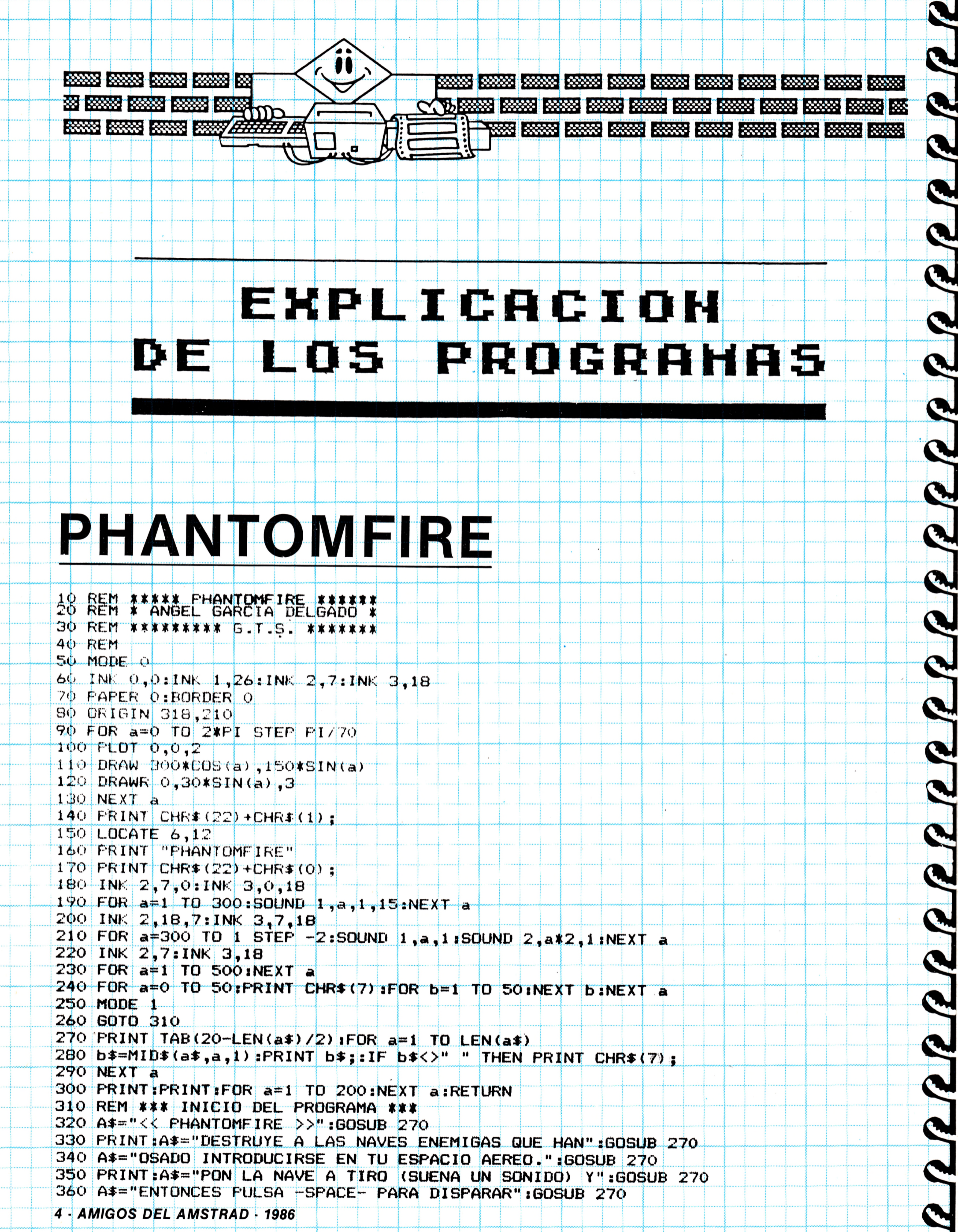
Esperamos que os sean de utilidad e interés y, con vuestra voluntad y nuestra pequeña contribución, seáis capaces de elaborar poco a poco, programas cada vez más complicados.

Gracias y hasta el próximo mes.



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SUMARIO



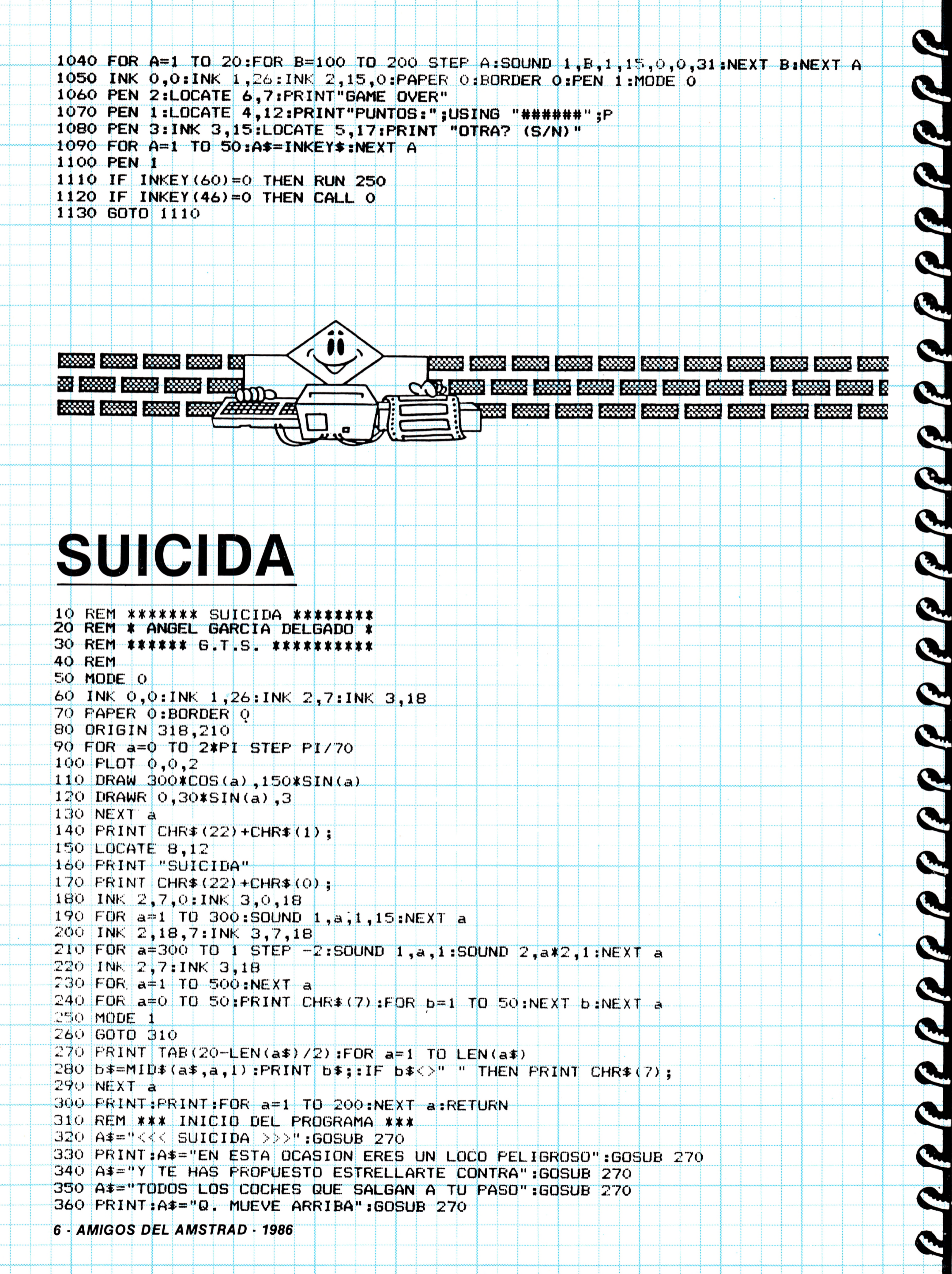
EXPLICACION DE LOS PROGRAMAS

PHANTOMFIRE

```
10 REM ***** PHANTOMFIRE ******
20 REM * ANGEL GARCIA DELGADO *
30 REM ********* G.T.S. *******
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 6,12
160 PRINT "PHANTOMFIRE"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<< PHANTOMFIRE >>":GOSUB 270
330 PRINT:A$="DESTRUYE A LAS NAVES ENEMIGAS QUE HAN":GOSUB 270
340 A$="OSADO INTRODUCIRSE EN TU ESPACIO AEREO.":GOSUB 270
350 PRINT:A$="PON LA NAVE A TIRO (SUENA UN SONIDO) Y":GOSUB 270
360 A$="ENTONCES PULSA -SPACE- PARA DISPARAR":GOSUB 270
```

```
370 PRINT:A$="PARA DESPLAZAR LA NAVE EMPLEA LAS":GOSUB 270
380 A$="TECLAS DEL CURSOR":GOSUB 270
390 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
400 IF INKEY(60)<>0 THEN 400
410 v=1:GOSUB 940:INK 0,26:PAPER 0:BORDER 26:INK 1,18:INK 2,19:INK 3,21:INK 4,0
INK 5,6:INK 6,15,5:INK 7,11:MODE 0:ENT 1,10,-1,1
420 ENV 1,30,-1,1:ENT 2,50,1,1
430 WINDOW #1,7,14,22,22:PEN #1,5
440 WINDOW #2,6,15,24,24:PEN #2,6
450 v$="&&&&&&&&"
460 y=200:FOR n=1 TO 5
470 PEN 1:FOR a=1 TO n*2:y=y-2:PLOT 0,y,1:DRAWR 650,0:NEXT a
480 FOR a=1 TO n*3:y=y-2:PLOT 0,y,2:DRAWR 650,0:NEXT a
490 FOR a=1 TO n*4:y=y-2:PLOT 0,y,3:DRAWR 650,0:NEXT a
500 NEXT n
510 FOR a=150 TO 250:PLOT a,0,0:DRAWR 0,a-150:DRAWR -50,0:NEXT a
520 FOR a=250 TO 370:PLOT a,0:DRAWR 0,100:NEXT a
530 FOR a=370 TO 470:PLOT a,0:DRAWR 0,ABS(470-a):DRAWR 50,0:NEXT a
540 LOCATE 8,20:PEN 7:PRINT"&&&&&&"
550 p=0:GOSUB 880:GOSUB 860
560 y=300:x=150:PRINT CHR$(23)+CHR$(1):TAG
570 IF v=1 THEN INK 1,9:INK 2,18:INK 3,19
580 IF v=2 THEN INK 1,19:INK 2,9:INK 3,18
590 IF v=3 THEN INK 1,18:INK 2,19:INK 3,9
600 SOUND 4,500,10,10,0,0,31
610 x=x+INT(16*RND-16*RND):IF INKEY(0)=0 THEN x=x-8
620 IF INKEY(2)=0 THEN x=x+8
630 y=y+INT(16*RND-16*RND):IF INKEY(8)=0 THEN y=y+8
640 IF INKEY(1)=0 THEN y=y-8
650 IF x<124 THEN x=124
660 MOVE y,x,4:PRINT"[]";:IF RND>0.99 THEN GOSUB 890
670 v=v+1:IF v>3 THEN v=1
680 IF x<240 THEN IF x>210 THEN IF y<310 THEN IF y>270 THEN SOUND 1,20,5,15
690 IF INKEY(47)=0 THEN GOSUB 720
700 MOVE y,x:PRINT"[]";
710 GOTO 570
720 MOVE 200,100:DRAW 316,220:MOVE 422,100:DRAW 320,220
730 SOUND 2,50,20,15,0,2
740 IF x>240 THEN GOTO 810
750 IF x<210 THEN GOTO 810
760 IF y>310 THEN 810
770 IF y<270 THEN 810
780 SOUND 3,100,30,15,0,2,31:p=p+15:GOSUB 880
790 MOVE y,x:PRINT"[]";:x=200+INT(RND*200):y=INT(RND*600):MOVE y,x:PRINT"[]";
800 GOTO 830
810 p=p-2:IF p<0 THEN p=0
820 GOSUB 880
830 REM
840 MOVE 200,100:DRAW 316,220:MOVE 422,100:DRAW 320,220
850 RETURN
860 PRINT#2,v$:IF LEN(v$)=0 THEN GOTO 1030
870 RETURN
880 PRINT#1,p:RETURN
890 MOVE y,x-8:DRAW 312,114:MOVE y+64,x-8:DRAW 312,114
900 SOUND 1,100,10,15,0,1
910 v$=MID$(v$,2,11):GOSUB 860
920 MOVE y,x-8:DRAW 312,114:MOVE y+64,x-8:DRAW 312,114
930 RETURN
940 SYMBOL AFTER 32
950 SYMBOL 160,1,3,6,15,31,57,112,63
960 SYMBOL 161,128,192,96,240,248,156,14,252
970 SYMBOL 64,66,153,165,219,255,189,153,66
980 SYMBOL 91,0,7,9,61,119,192,128,0
990 SYMBOL 93,0,224,144,188,238,3,1,0
1000 SYMBOL 92,20,65,8,34,144,4,65,20
1010 SYMBOL 38,254,254,254,254,254,254,254,254
1020 RETURN
1030 REM *** GAME OVER ***
```

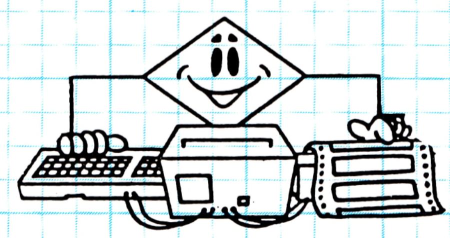
```
1040 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
1050 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
1060 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
1070 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "######";P
1080 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
1090 FOR A=1 TO 50:A$=INKEY$:NEXT A
1100 PEN 1
1110 IF INKEY(60)=0 THEN RUN 250
1120 IF INKEY(46)=0 THEN CALL 0
1130 GOTO 1110
```

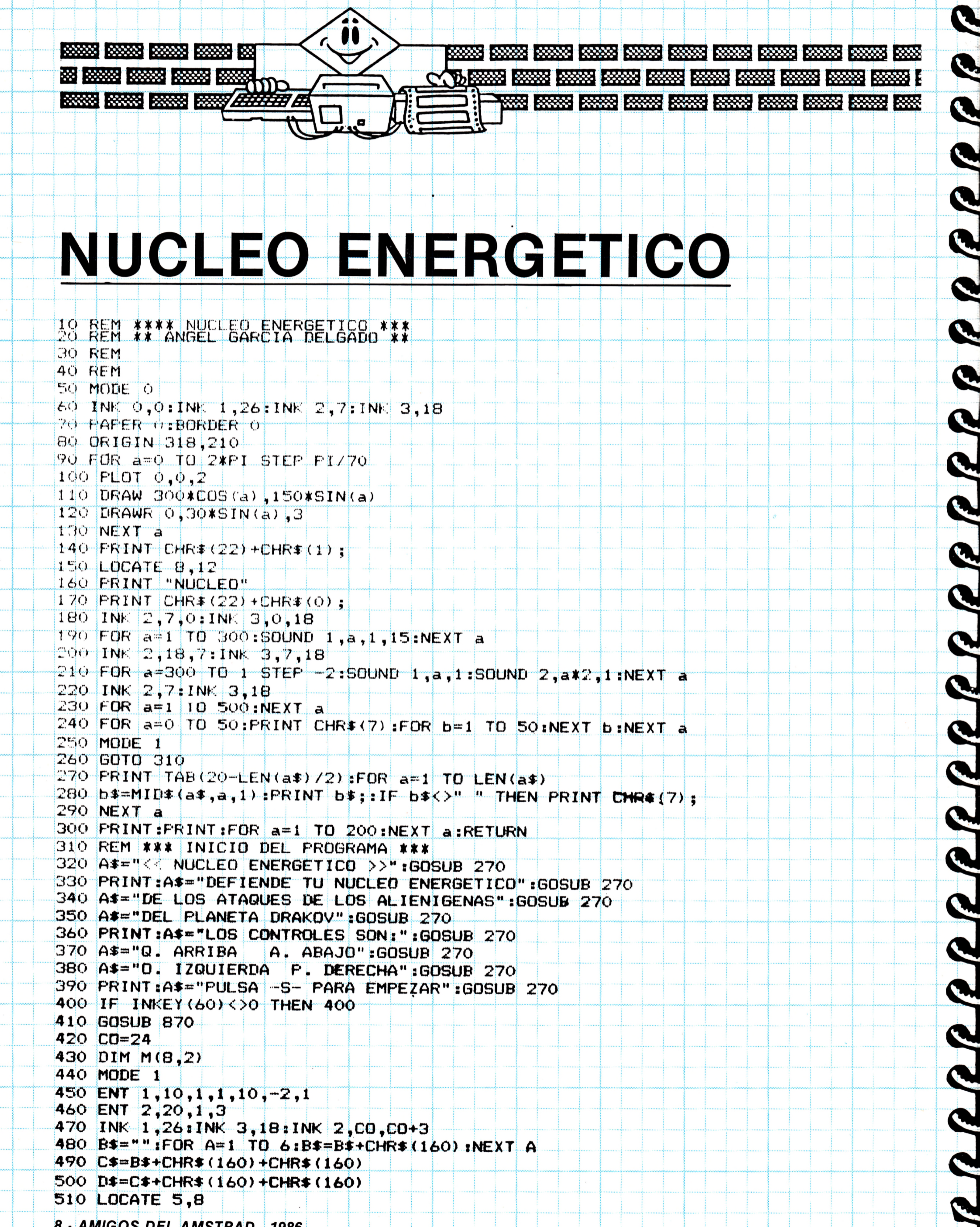


SUICIDA

```
10 REM ******* SUICIDA ********
20 REM * ANGEL GARCIA DELGADO *
30 REM ****** G.T.S. **********
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 8,12
160 PRINT "SUICIDA"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<<< SUICIDA >>>":GOSUB 270
330 PRINT:A$="EN ESTA OCASION ERES UN LOCO PELIGROSO":GOSUB 270
340 A$="Y TE HAS PROPUESTO ESTRELLARTE CONTRA":GOSUB 270
350 A$="TODOS LOS COCHES QUE SALGAN A TU PASO":GOSUB 270
360 PRINT:A$="Q. MUEVE ARRIBA":GOSUB 270
```

```
370 A$="A. MUEVE ABAJO":GOSUB 270
380 PRINT:A$="PULSA -S- PARA EMPEZAR"
390 GOSUB 270
400 IF INKEY(60)<>0 THEN 400
410 GOSUB 870
420 INK 0,0:INK 1,26:INK 2,17:INK 3,12
430 PAPER 0:BORDER 0:PEN 1
440 MODE 1
450 b$=CHR$(160)+CHR$(161):m$=CHR$(162)+CHR$(163)
460 E$=CHR$(164)+CHR$(165)
470 H=13
480 P=0:F=0
490 GOSUB 770
500 X=13:Y=37:I=1
510 ORIGIN 0,200:PLOT 0,60,1:DRAWR 650,0:PLOT 0,-60:DRAWR 650,0
520 PEN 2:LOCATE 10,H:PRINT"  "
530 IF INKEY(67)=0 THEN H=H-1:IF H<10 THEN H=10
540 IF INKEY(69)=0 THEN H=H+1:IF H>16 THEN H=16
550 LOCATE 10,H:PRINT B$
560 SOUND 1,1000,1
570 PEN 3
580 LOCATE Y,X:PRINT"  "
590 X=X+I
600 Y=Y-1
610 IF X>15 THEN I=-1
620 IF X<11 THEN I=1
630 IF Y<1 THEN Y=37:F=F+1:GOSUB 770
640 LOCATE Y,X:PRINT M$
650 SOUND 1,800,1
660 IF X=H THEN IF Y=10 OR Y=11 OR Y=12 THEN GOTO 680
670 GOTO 520
680 LOCATE 11,H:PRINT E$:GOSUB 750
690 LOCATE 10,H:PRINT E$:GOSUB 750
700 LOCATE 11,H:PRINT E$:GOSUB 750
710 P=P+15:GOSUB 770
720 GOSUB 750:GOSUB 750
730 LOCATE 10,H:PRINT "     ":GOSUB 750
740 Y=37:GOTO 520
750 FOR A=1000 TO 1100 STEP 10:SOUND 1,A,1,15,0,0,31:NEXT A:RETURN
760 END
770 PEN 1:LOCATE 4,3:PRINT"PUNTOS: ";P;TAB(25);"FALLOS: ";F
780 IF F>9 THEN GOTO 800
790 RETURN
800 INK 2,15,0
810 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
820 MODE 0
830 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
840 PEN 1:LOCATE 4,14:PRINT"PUNTOS:";USING "######";P
850 FOR A=1 TO 10000:NEXT A
860 GOTO 250
870 SYMBOL AFTER 160
880 SYMBOL 160,31,57,113,225,255,199,187,56
890 SYMBOL 161,128,64,32,240,254,199,187,56
900 SYMBOL 162,1,2,4,127,255,199,187,56
910 SYMBOL 163,128,128,128,255,255,227,221,28
920 SYMBOL 164,99,136,18,64,43,136,34,153
930 SYMBOL 165,198,17,72,2,212,17,68,153
940 RETURN
```





NUCLEO ENERGETICO

```
10 REM **** NUCLEO ENERGETICO ***
20 REM ** ANGEL GARCIA DELGADO **
30 REM
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 8,12
160 PRINT "NUCLEO"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<< NUCLEO ENERGETICO >>":GOSUB 270
330 PRINT:A$="DEFIENDE TU NUCLEO ENERGETICO":GOSUB 270
340 A$="DE LOS ATAQUES DE LOS ALIENIGENAS":GOSUB 270
350 A$="DEL PLANETA DRAKOV":GOSUB 270
360 PRINT:A$="LOS CONTROLES SON:":GOSUB 270
370 A$="Q. ARRIBA   A. ABAJO":GOSUB 270
380 A$="O. IZQUIERDA  P. DERECHA":GOSUB 270
390 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
400 IF INKEY(60)<>0 THEN 400
410 GOSUB 870
420 CO=24
430 DIM M(8,2)
440 MODE 1
450 ENT 1,10,1,1,10,-2,1
460 ENT 2,20,1,3
470 INK 1,26:INK 3,18:INK 2,CO,CO+3
480 B$="":FOR A=1 TO 6:B$=B$+CHR$(160):NEXT A
490 C$=B$+CHR$(160)+CHR$(160)
500 D$=C$+CHR$(160)+CHR$(160)
510 LOCATE 5,8
```

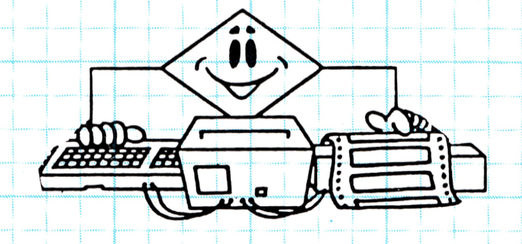
```
520 A$=B$:GOSUB 970:A$=C$:GOSUB 970:A$=D$:FOR A=1 TO 5:GOSUB 970:NEXT A
530 A$=C$:GOSUB 970:A$=B$:GOSUB 970
540 X=10:Y=5
550 XB=X:YB=1
560 FOR A=1 TO 8
570 GOSUB 980
580 NEXT A
590 A=1
600 PEN 3:GOSUB 740
610 A=A+1:IF A>8 THEN A=1
620 IF INKEY(67)=0 THEN X=X-1:IF X<1 THEN X=1
630 IF INKEY(69)=0 THEN X=X+1:IF X>25 THEN X=25
640 IF INKEY(34)=0 THEN Y=Y-1:IF Y<1 THEN Y=1
650 IF INKEY(27)=0 THEN Y=Y+1:IF Y>39 THEN Y=39
660 LOCATE Y,X:CALL 30000:C=PEEK(29999)
670 IF C=0 THEN X=XB:Y=YB
680 IF C=161 THEN GOSUB 840
690 PEN 1
700 LOCATE YB,XB:PRINT" ":LOCATE Y,X:PRINT CHR$(248+RND*3)
710 XB=X:YB=Y
720 SOUND 4,100,20,5+CO/3,0,1
730 GOTO 600
740 XM=M(A,1):YM=M(A,2):LOCATE YM,XM:PRINT" "
750 IF XM>12 THEN IF RND>0.5 THEN XM=XM-1
760 IF XM<12 THEN IF RND>0.5 THEN XM=XM+1
770 IF YM<20 THEN IF RND>0.5 THEN YM=YM+1
780 IF YM>20 THEN IF RND>0.5 THEN YM=YM-1
790 LOCATE YM,XM:CALL 30000:C=PEEK(29999)
800 IF C=0 THEN GOSUB 1040
810 PEN 3:LOCATE YM,XM:PRINT CHR$(161)
820 M(A,1)=XM:M(A,2)=YM
830 RETURN
840 FOR A=1 TO 8
850 IF M(A,1)=X THEN IF M(A,2)=Y THEN SOUND 1,200,25,15,0,2:GOSUB 980:P=P+5:RETU
RN
860 NEXT A:A=1:RETURN
870 REM ** CODE SCREEN$ **
880 DATA 205,96,187,50,47,117,201
890 RESTORE 880
900 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
910 SYMBOL AFTER 160
920 SYMBOL 160,126,219,165,219,219,165,219,126
930 SYMBOL 161,255,153,189,255,129,255,66,231
940 SYMBOL 162,0,36,90,36,36,90,36,0
950 RETURN
960 REM ******************
970 PRINT TAB(20-LEN(A$)/2);:PAPER 3:PEN 2:PRINT A$:PAPER 0:PEN 1:RETURN
980 XX=1+INT(RND*24):YY=1+INT(RND*39)
990 LOCATE YY,XX:CALL 30000
1000 IF PEEK(29999)<>32 THEN GOTO 980
1010 M(A,1)=XX:M(A,2)=YY
1020 LOCATE YY,XX:PEN 3:PRINT CHR$(161)
1030 RETURN
1040 REM *** MUERTO ***
1050 XM=M(A,1):YM=M(A,2)
1060 FOR Z=1 TO 200 STEP 10:SOUND 2,Z,2,15,0,1:NEXT Z
1070 CO=CO-2:INK 2,CO,CO+3:IF CO<1 THEN GOTO 1090
1080 RETURN
1090 REM *** GAME OVER ***
1100 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
1110 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
1120 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
1130 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "######";P
1140 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
1150 FOR A=1 TO 50:A$=INKEY$:NEXT A
1160 PEN 1
1170 IF INKEY(60)=0 THEN RUN 250
1180 IF INKEY(46)=0 THEN CALL 0
1190 GOTO 1170
```

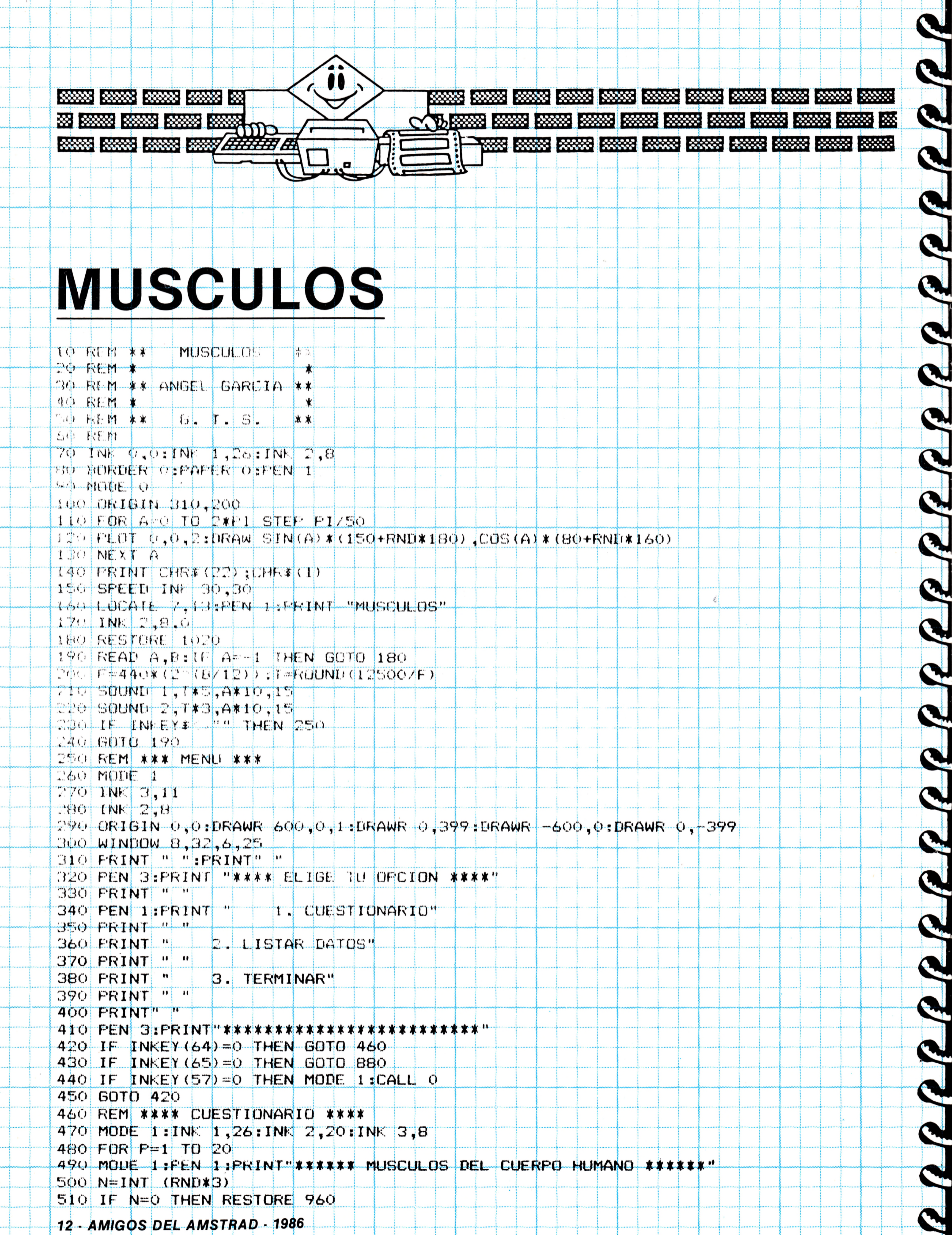


NAUFRAGO

```
10 REM *** NAUFRAGO ***
20 REM * ANGEL GARCIA *
30 REM **** G.T.S. ****
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 7,12
160 PRINT "NAUFRAGO"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<< NAUFRAGO >>":GOSUB 270
330 PRINT:A$="RECOGE LAS PROVISIONES QUE TE":GOSUB 270
340 A$="ENVIA EL AVION PARA QUE SOBREVIVAS":GOSUB 270
350 A$="AL NAUFRAGIO, HASTA QUE VENGA":GOSUB 270
360 A$="UN BARCO A RESCATARTE":GOSUB 270
370 PRINT:A$="CONTROLES DE TU BARCA:":GOSUB 270
380 A$="F1. MUEVE A LA IZQUIERDA":GOSUB 270
390 A$="F3. MUEVE A LA DERECHA":GOSUB 270
400 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
410 IF INKEY(60)<>0 THEN 410
420 ENT 1,10,1,1,10,-1,1
430 GOSUB 720
440 INK 0,23:PAPER 0:BORDER 23:INK 1,0:PEN 1:MODE 0
450 INK 2,4:INK 3,6:INK 4,14:INK 5,26
460 WINDOW #1,1,20,24,25:PEN #1,5:PAPER #1,4:WINDOW #2,1,20,19,25:PAPER #2,4:CLS
 #2
470 AC=0:FA=0:GOSUB 660
480 pa=1:xp=5:yp=5
490 y=8
500 xa=1+INT(RND*10):ya=0
```

```
510 IF INKEY(13)=0 THEN y=y-1:IF y<2 THEN y=2
520 IF INKEY(5)=0 THEN y=y+1:IF y>18 THEN y=18
530 EVERY 50 GOSUB 830
540 LOCATE y-1,18:PEN 3:PRINT ba$
550 ya=ya+1:IF ya>17 THEN LOCATE ya,xa:PRINT "  ":xa=1+INT(RND*10):ya=1
560 LOCATE ya,xa:PEN 1:PRINT av$
570 SOUND 1,800,10,10,0,1,31
580 ON pa GOSUB 600,620
590 GOTO 510
600 IF RND>0.95 THEN pa=2:xp=xa+1:yp=ya+2:SOUND 2,100,10,15
610 RETURN
620 LOCATE yp,xp:PRINT" ":xp=xp+1:LOCATE yp,xp:PEN 2:PRINT pc$
630 IF xp>16 THEN LOCATE yp,xp:PRINT" ":LOCATE yp,xp+1:PRINT" ":pa=1:fa=fa+1:SOU
ND 2,400,20,15:GOSUB 660
640 IF xp=15 OR xp=16 THEN IF yp=y OR yp=y+1 THEN SOUND 2,200,20,15:ac=ac+1:GOSU
B 660:LOCATE yp,xp:PRINT" ":LOCATE yp,xp+1:PRINT" ":
pa=1
650 RETURN
660 LOCATE #1,4,1:PRINT #1,"AC:";USING "##";AC
670 LOCATE #1,13,1:PRINT #1,"FA:";USING "##";FA
680 IF FA>19 THEN GOTO 700
690 RETURN
700 P=AC*15:FOR A=1 TO 20:A$=INKEY$:NEXT A
710 GOTO 840
720 SYMBOL AFTER 160
730 SYMBOL 160,224,240,240,249,135,126,63,0
740 SYMBOL 161,0,0,129,64,253,255,248,1
750 SYMBOL 162,60,78,191,255,129,66,36,24
760 SYMBOL 163,110,255,126,255,255,110,0,0
770 SYMBOL 164,3,11,5,3,255,127,31,15
780 SYMBOL 165,192,208,160,192,255,254,248,240
790 av$=" "+CHR$(160)+CHR$(161)
800 pc$=CHR$(162)+CHR$(8)+CHR$(10)+CHR$(163)
810 ba$=" "+CHR$(164)+CHR$(165)+" "
820 RETURN
830 CALL &BD19:RETURN
840 REM *** GAME OVER ***
850 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
860 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
870 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
880 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "######";P
890 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
900 FOR A=1 TO 50:A$=INKEY$:NEXT A
910 PEN 1
920 IF INKEY(60)=0 THEN RUN 250
930 IF INKEY(46)=0 THEN CALL 0
940 GOTO 920
```

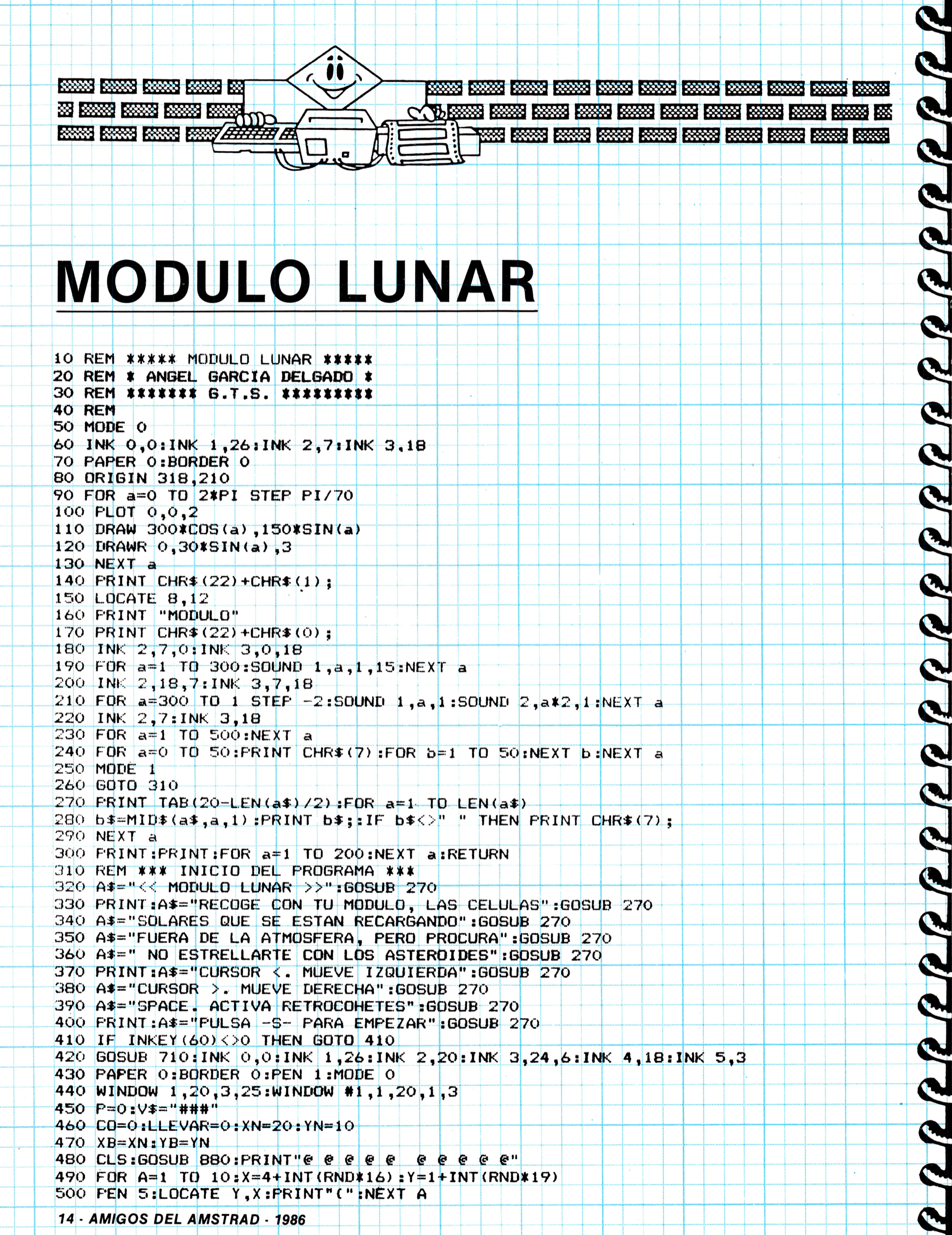




MUSCULOS

```
10 REM **    MUSCULOS     **
20 REM *                   *
30 REM ** ANGEL GARCIA **
40 REM *                   *
50 REM **    G. T. S.     **
60 REM
70 INK 0,0:INK 1,26:INK 2,8
80 BORDER 0:PAPER 0:PEN 1
90 MODE 0
100 ORIGIN 310,200
110 FOR A=0 TO 2*PI STEP PI/50
120 PLOT 0,0,2:DRAW SIN(A)*(150+RND*180),COS(A)*(80+RND*160)
130 NEXT A
140 PRINT CHR$(22);CHR$(1)
150 SPEED INK 30,30
160 LOCATE 7,13:PEN 1:PRINT "MUSCULOS"
170 INK 2,8,6
180 RESTORE 1020
190 READ A,B:IF A=-1 THEN GOTO 180
200 F=440*(2^(B/12)):T=ROUND(12500/F)
210 SOUND 1,T*5,A*10,15
220 SOUND 2,T*3,A*10,15
230 IF INKEY$<>"" THEN 250
240 GOTO 190
250 REM *** MENU ***
260 MODE 1
270 INK 3,11
280 INK 2,8
290 ORIGIN 0,0:DRAWR 600,0,1:DRAWR 0,399:DRAWR -600,0:DRAWR 0,-399
300 WINDOW 8,32,6,25
310 PRINT " ":PRINT" "
320 PEN 3:PRINT "**** ELIGE TU OPCION ****"
330 PRINT " "
340 PEN 1:PRINT "     1. CUESTIONARIO"
350 PRINT " "
360 PRINT "     2. LISTAR DATOS"
370 PRINT " "
380 PRINT "     3. TERMINAR"
390 PRINT " "
400 PRINT" "
410 PEN 3:PRINT"**************************"
420 IF INKEY(64)=0 THEN GOTO 460
430 IF INKEY(65)=0 THEN GOTO 880
440 IF INKEY(57)=0 THEN MODE 1:CALL 0
450 GOTO 420
460 REM **** CUESTIONARIO ****
470 MODE 1:INK 1,26:INK 2,20:INK 3,8
480 FOR P=1 TO 20
490 MODE 1:PEN 1:PRINT"****** MUSCULOS DEL CUERPO HUMANO ******"
500 N=INT (RND*3)
510 IF N=0 THEN RESTORE 960
```

```
520 IF N=1 THEN RESTORE 980
530 IF N=2 THEN RESTORE 1000
540 READ R$,NN:NN=INT(RND*NN):FOR Z=0 TO NN:READ I$:NEXT Z
550 PEN 3:PRINT" "
560 PRINT"PREGUNTA:";P;TAB(17);"MUSCULO: ";I$
570 PRINT " ":PEN 2
580 PRINT " "
590 PRINT "A QUE PARTE PARTE DEL CUERPO CORRESPONDE";:PRINT " ":PRINT"
 EL MUSCULO CITADO:"
600 PRINT" ":PRINT" "
610 PEN 3:PRINT "                  (PULSA 1,2 o 3)"
620 PEN 1:PRINT " "
630 PRINT" ":PRINT "                  1. CABEZA (Y CUELLO)"
640 PRINT" ":PRINT "                  2. TRONCO (TORAX-ABDOMEN)"
650 PRINT" ":PRINT "                  3. EXTREMIDADES"
660 SOUND 1,100,10
670 REM
680 IF INKEY(64)=0 THEN NR=0:GOTO 720
690 IF INKEY(65)=0 THEN NR=1:GOTO 720
700 IF INKEY(57)=0 THEN NR=2:GOTO 720
710 GOTO 670
720 PEN 2:PRINT " ":PRINT" ":IF NR=N THEN PRINT "!!!CORRECTO!!! LA RESPUESTA ES
";R$:FOR B=1 TO 3:FOR A=15 TO 0 STEP -1:INK 0,A:SOUN
D 1,A,1:NEXT A,B:AC=AC+1
730 IF NR<>N THEN PRINT "INCORRECTO. LA RESPUESTA ERA ";R$:SOUND 1,600,100:FOR A
=1 TO 100:PLOT RND*600,RND*400:NEXT A
740 NEXT P
750 MODE 0:FOR A=1 TO 15:INK A,27-A:NEXT A
760 PEN 5:PRINT "**** RESULTADOS ****"
770 PRINT" ":PRINT" "
780 PEN 2:PRINT "  ACIERTOS.....";AC
790 PRINT " "
800 PEN 3:PRINT "  FALLOS.......";20-AC
810 PRINT" ":PRINT" ":PRINT" "
820 PEN 1:PRINT"  PORCENTAJE:";AC*5;"%"
830 PRINT" ":PRINT" ":PRINT" "
840 PRINT "********************"
850 FOR A=0 TO 100:A$=INKEY$:SOUND 1,A,1,15:NEXT A
860 IF INKEY$=""THEN 860
870 GOTO 250
880 MODE 2:RESTORE 960
890 FOR A=1 TO 3
900 READ A$,N
910 PRINT "- ";A$;":":PRINT" "
920 FOR B=1 TO N:READ B$:PRINT "   ";B$,:NEXT B
930 PRINT" ":PRINT" ":PRINT " "
940 NEXT A
950 GOTO 850
960 DATA CABEZA,9
970 DATA TEMPORAL,MASETERO,PTERIGOIDEO,ORBICULAR,SUPERCILIAR,BUCCINADOR,LINGUAL,
ESTERNOCLEIDOMASTOIDEO,CUTANEO
980 DATA TRONCO,8
990 DATA PECTORAL,SERRATO,INTERCOSTAL,RECTO,OBLICUO,TRANSVERSO,CUADRADO,DIAFRAGM
A
1000 DATA EXTREMIDADES,18
1010 DATA DELTOIDES,SUPRAESPINOSO,INFRAESPINOSO,REDONDO,SUBESCAPULAR,BICEPS,TRIC
EPS,BRAQUIAL,CUBITAL,RADIAL,SUPINADOR,EXTENSORES,FLE
XORES,SARTORIO,SEMITENDINOSO,TIBIAL,PERONEOS,GEMELOS
1020 DATA 8,4,4,5,4,7,4,7,4,5,4,4,4,2,4,0,4,0,4,2,4,4,8,4,2,2,8,2,8,4,4,5,4,7,4,
7,4,5,4,4,4,2,4,0,4,0,4,2,4,4,8,2,2,0,9,0
1030 DATA -1,-1
```



MODULO LUNAR

```
10 REM ***** MODULO LUNAR *****
20 REM * ANGEL GARCIA DELGADO *
30 REM ******* G.T.S. *********
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 8,12
160 PRINT "MODULO"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<< MODULO LUNAR >>":GOSUB 270
330 PRINT:A$="RECOGE CON TU MODULO, LAS CELULAS":GOSUB 270
340 A$="SOLARES QUE SE ESTAN RECARGANDO":GOSUB 270
350 A$="FUERA DE LA ATMOSFERA, PERO PROCURA":GOSUB 270
360 A$=" NO ESTRELLARTE CON LOS ASTEROIDES":GOSUB 270
370 PRINT:A$="CURSOR <. MUEVE IZQUIERDA":GOSUB 270
380 A$="CURSOR >. MUEVE DERECHA":GOSUB 270
390 A$="SPACE. ACTIVA RETROCOHETES":GOSUB 270
400 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
410 IF INKEY(60)<>0 THEN GOTO 410
420 GOSUB 710:INK 0,0:INK 1,26:INK 2,20:INK 3,24,6:INK 4,18:INK 5,3
430 PAPER 0:BORDER 0:PEN 1:MODE 0
440 WINDOW 1,20,3,25:WINDOW #1,1,20,1,3
450 P=0:V$="###"
460 CO=0:LLEVAR=0:XN=20:YN=10
470 XB=XN:YB=YN
480 CLS:GOSUB 880:PRINT"@ @ @ @ @  @ @ @ @ @"
490 FOR A=1 TO 10:X=4+INT(RND*16):Y=1+INT(RND*19)
500 PEN 5:LOCATE Y,X:PRINT"(":NEXT A
```

```
510 PEN 1:LOCATE 9,21:PRINT"\\\\"
520 T=INKEY(47):IF T=0 THEN XN=XN-1:SOUND 4,200,5,15,0,0,31:IF XN<1 THEN XN=1
530 IF T<>0 THEN XN=XN+1:IF XN>21 THEN GOSUB 760
540 IF INKEY(8)=0 THEN YN=YN-1:IF YN<1 THEN YN=1
550 IF INKEY(1)=0 THEN YN=YN+1:IF YN>20 THEN YN=20
560 LOCATE YN,XN:CALL 30000:C=PEEK(29999)
570 IF C<>32 THEN GOSUB 610
580 PEN 2:LOCATE YB,XB:PRINT" ":LOCATE YN,XN:PRINT"["
590 XB=XN:YB=YN
600 GOTO 520
610 IF C=64 THEN IF LLEVAR=1 THEN SOUND 1,900,5,15:XN=XB:YN=YB
620 IF C=64 THEN IF LLEVAR=0 THEN LLEVAR=1:FOR A=1 TO 100 STEP 10:SOUND 2,A,1,15
:NEXT A
630 IF C=123 THEN GOSUB 760
640 IF C=92 THEN GOSUB 660
650 RETURN
660 IF LLEVAR=1 THEN FOR A=100 TO 1 STEP -10:SOUND 2,A,1,15:NEXT A:P=P+15:GOSUB
880:CO=CO+1:LLEVAR=0:IF CO>9 THEN GOTO 690
670 IF LLEVAR=0 THEN XN=XB:YN=YB
680 RETURN
690 FOR A=1000 TO 1 STEP -8:SOUND 1,A,1,15:NEXT A
700 GOTO 460
710 REM ** CODE SCREEN$ **
720 DATA 205,96,187,50,47,117,201
730 RESTORE 720
740 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
750 GOTO 800
760 LOCATE YB,XB:PRINT" ":LOCATE YN,XN:PEN 3:PRINT CHR$(160):PEN 1
770 FOR A=1 TO 400:SOUND 4,A,1,15,0,0,31:NEXT A
780 LOCATE YN,XN:PRINT" "
790 V$=MID$(V$,1,LEN(V$)-1):GOSUB 880:XN=20:yn=10:RETURN
800 SYMBOL AFTER 32
810 SYMBOL 91,24,44,94,191,191,191,255,126
820 SYMBOL 93,16,56,92,56,48,32,16,0
830 SYMBOL 92,255,255,255,44,44,44,94,191
840 SYMBOL 160,145,0,84,56,253,16,68,146
850 SYMBOL 64,24,60,102,219,219,102,60,24
860 SYMBOL 123,0,24,62,126,63,127,62,24
870 RETURN
880 PEN#1,4:LOCATE #1,1,1:PRINT#1," PUNTOS:";:PEN#1,1:PRINT#1,P:LOCATE #1,17,1:P
EN#1,2:PRINT #1,V$;" ";
890 IF LEN(V$)=0 THEN GOTO 910
900 RETURN
910 REM *** GAME OVER ***
920 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
930 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
940 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
950 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "######";P
960 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
970 FOR A=1 TO 50:A$=INKEY$:NEXT A
980 PEN 1
990 IF INKEY(60)=0 THEN RUN 250
1000 IF INKEY(46)=0 THEN CALL 0
1010 GOTO 990
```

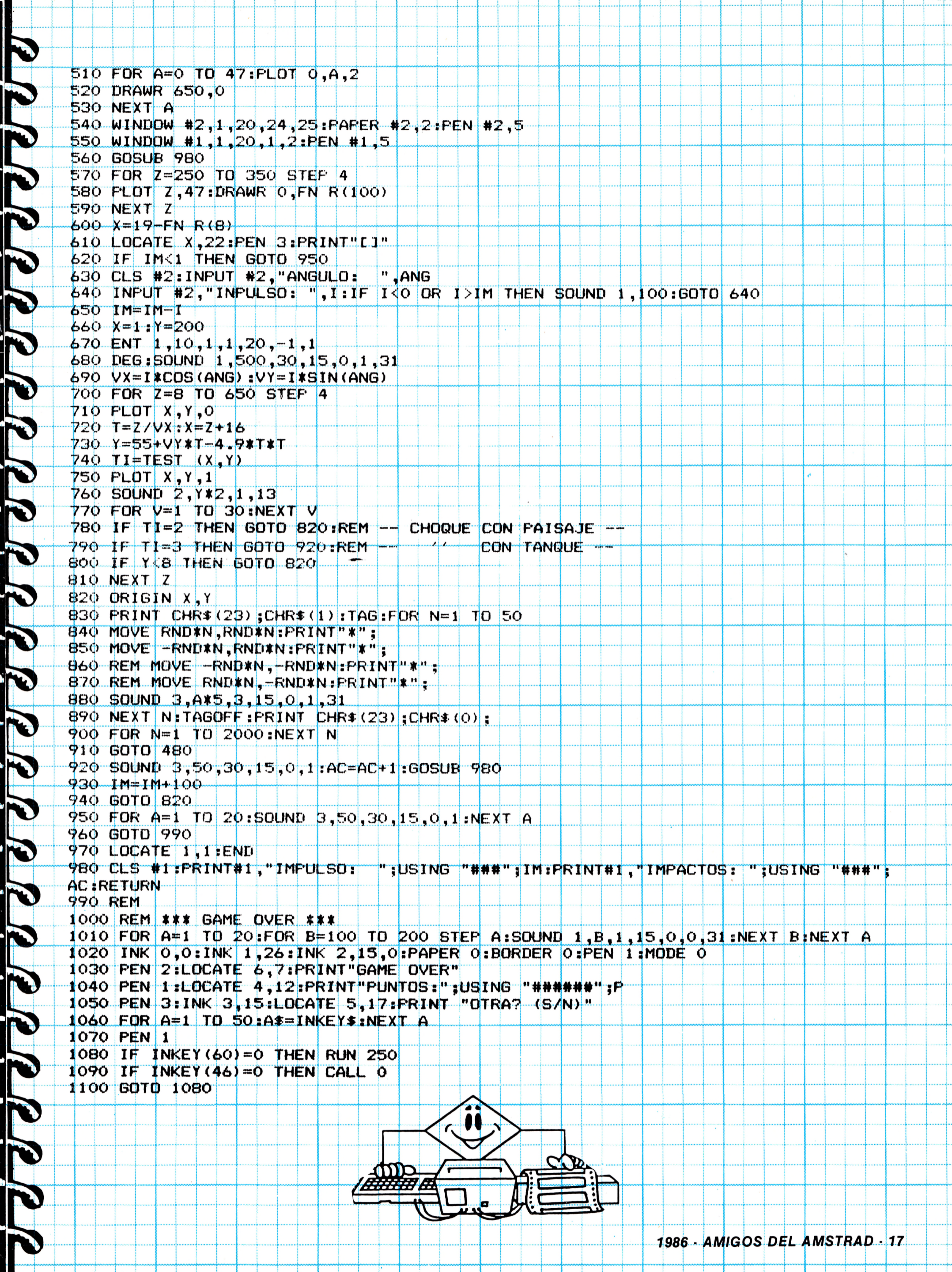


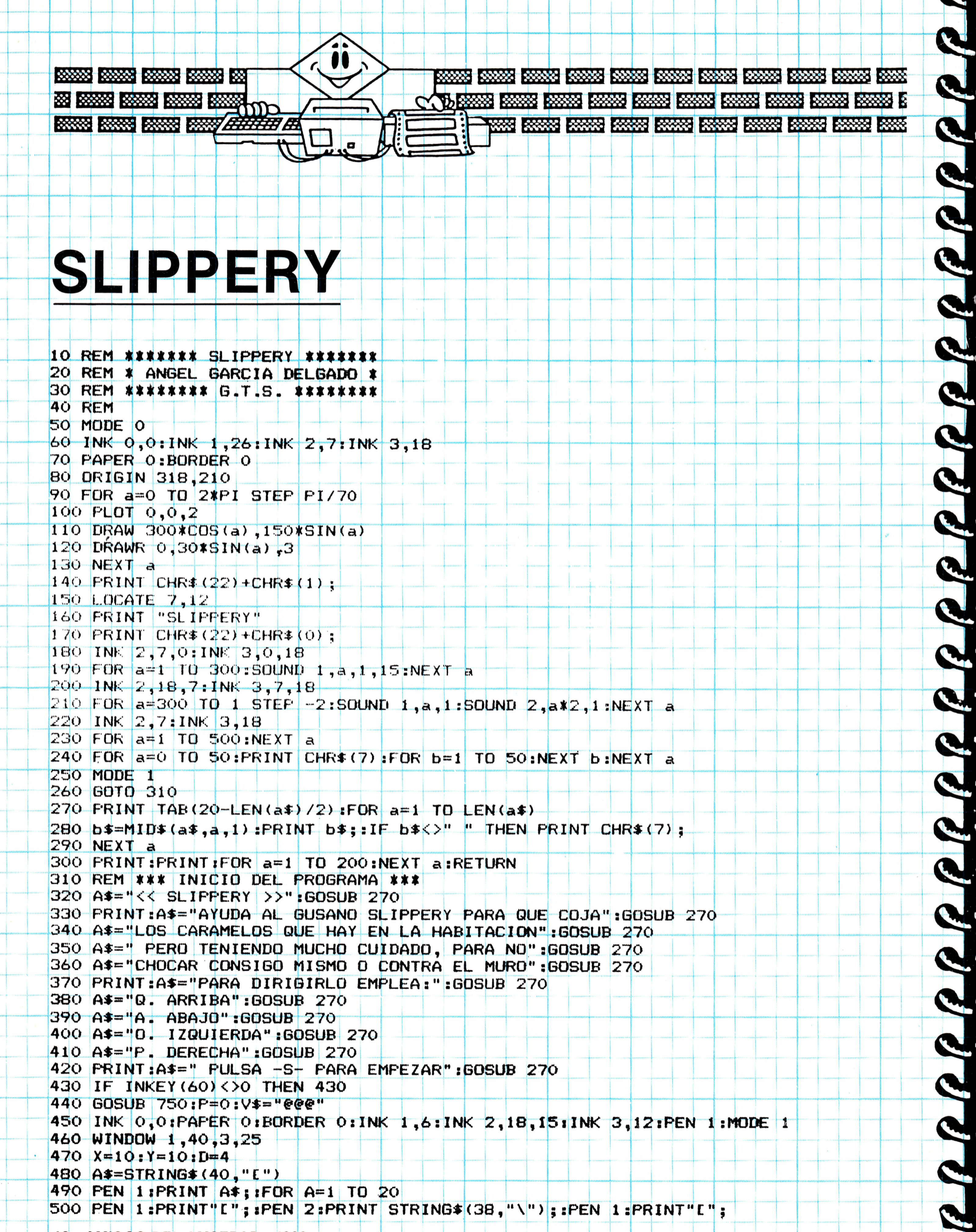


ARTILLERIA

```
10 REM ******* ARTILLERIA *******
20 REM * ANGEL GARCIA DELGADO ***
30 REM ********* G.T.S. *********
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 6,12
160 PRINT "ARTILLERIA"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<< ARTILLERIA >>":GOSUB 270
330 PRINT:A$="DESTRUYE UN TANQUE QUE SE ENCUENTRA":GOSUB 270
340 A$="AL OTRO LADO DE LA CADENA DE MONTES.":GOSUB 270
350 PRINT:A$="TU PUEDES REGULAR EL ANGULO DE TIRO":GOSUB 270
360 A$="Y EL IMPULSO (VELOCIDAD INICIAL)":GOSUB 270
370 A$="DE TU UNIDAD ARTILLERA":GOSUB 270
380 PRINT:A$="POR CADA TANQUE DESTRUIDO SE TE":GOSUB 270
390 A$="AUMENTARA EN 100 UNIDADES EL INPULSO":GOSUB 270
400 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
410 IF INKEY(60)<>0 THEN 410
420 SYMBOL AFTER 32
430 SYMBOL 91,1,7,127,7,127,255,255,127
440 SYMBOL 93,128,224,224,224,254,255,255,254
450 SYMBOL 92,218,173,189,81,127,103,188,24
460 SYMBOL 64,129,66,36,152,104,102,233,150
470 IM=300:AC=0
480 INK 0,23:PAPER 0:BORDER 23:INK 1,0:INK 2,9:INK 3,2:INK 4,3:INK 5,26:PEN 1:MO
DE 0
490 DEF FN R(X)=INT(RND*X):ORIGIN 0,0
500 LOCATE 1,22:PEN 4:PRINT"@"
```

```
510 FOR A=0 TO 47:PLOT 0,A,2
520 DRAWR 650,0
530 NEXT A
540 WINDOW #2,1,20,24,25:PAPER #2,2:PEN #2,5
550 WINDOW #1,1,20,1,2:PEN #1,5
560 GOSUB 980
570 FOR Z=250 TO 350 STEP 4
580 PLOT Z,47:DRAWR 0,FN R(100)
590 NEXT Z
600 X=19-FN R(8)
610 LOCATE X,22:PEN 3:PRINT"[]"
620 IF IM<1 THEN GOTO 950
630 CLS #2:INPUT #2,"ANGULO:  ",ANG
640 INPUT #2,"INPULSO: ",I:IF I<0 OR I>IM THEN SOUND 1,100:GOTO 640
650 IM=IM-I
660 X=1:Y=200
670 ENT 1,10,1,1,20,-1,1
680 DEG:SOUND 1,500,30,15,0,1,31
690 VX=I*COS(ANG):VY=I*SIN(ANG)
700 FOR Z=8 TO 650 STEP 4
710 PLOT X,Y,0
720 T=Z/VX:X=Z+16
730 Y=55+VY*T-4.9*T*T
740 TI=TEST (X,Y)
750 PLOT X,Y,1
760 SOUND 2,Y*2,1,13
770 FOR V=1 TO 30:NEXT V
780 IF TI=2 THEN GOTO 820:REM -- CHOQUE CON PAISAJE --
790 IF TI=3 THEN GOTO 920:REM --   ''    CON TANQUE --
800 IF Y<8 THEN GOTO 820
810 NEXT Z
820 ORIGIN X,Y
830 PRINT CHR$(23);CHR$(1):TAG:FOR N=1 TO 50
840 MOVE RND*N,RND*N:PRINT"*";
850 MOVE -RND*N,RND*N:PRINT"*";
860 REM MOVE -RND*N,-RND*N:PRINT"*";
870 REM MOVE RND*N,-RND*N:PRINT"*";
880 SOUND 3,A*5,3,15,0,1,31
890 NEXT N:TAGOFF:PRINT CHR$(23);CHR$(0);
900 FOR N=1 TO 2000:NEXT N
910 GOTO 480
920 SOUND 3,50,30,15,0,1:AC=AC+1:GOSUB 980
930 IM=IM+100
940 GOTO 820
950 FOR A=1 TO 20:SOUND 3,50,30,15,0,1:NEXT A
960 GOTO 990
970 LOCATE 1,1:END
980 CLS #1:PRINT#1,"IMPULSO:  ";USING "###";IM:PRINT#1,"IMPACTOS: ";USING "###";
AC:RETURN
990 REM
1000 REM *** GAME OVER ***
1010 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
1020 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
1030 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
1040 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "######";P
1050 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
1060 FOR A=1 TO 50:A$=INKEY$:NEXT A
1070 PEN 1
1080 IF INKEY(60)=0 THEN RUN 250
1090 IF INKEY(46)=0 THEN CALL 0
1100 GOTO 1080
```

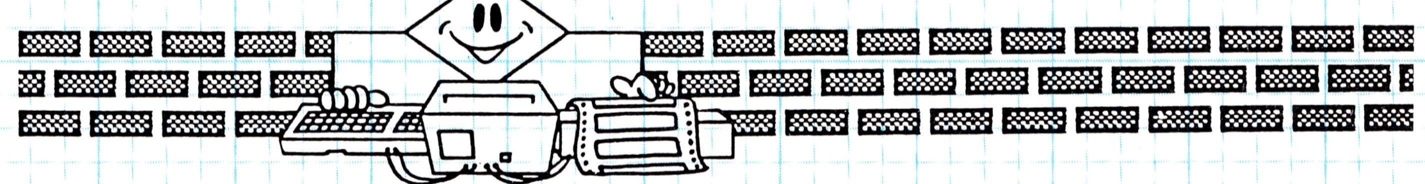




SLIPPERY

```
10 REM ******* SLIPPERY *******
20 REM * ANGEL GARCIA DELGADO *
30 REM ******** G.T.S. ********
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 7,12
160 PRINT "SLIPPERY"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<< SLIPPERY >>":GOSUB 270
330 PRINT:A$="AYUDA AL GUSANO SLIPPERY PARA QUE COJA":GOSUB 270
340 A$="LOS CARAMELOS QUE HAY EN LA HABITACION":GOSUB 270
350 A$=" PERO TENIENDO MUCHO CUIDADO, PARA NO":GOSUB 270
360 A$="CHOCAR CONSIGO MISMO O CONTRA EL MURO":GOSUB 270
370 PRINT:A$="PARA DIRIGIRLO EMPLEA:":GOSUB 270
380 A$="Q. ARRIBA":GOSUB 270
390 A$="A. ABAJO":GOSUB 270
400 A$="O. IZQUIERDA":GOSUB 270
410 A$="P. DERECHA":GOSUB 270
420 PRINT:A$=" PULSA -S- PARA EMPEZAR":GOSUB 270
430 IF INKEY(60)<>0 THEN 430
440 GOSUB 750:P=0:V$="@@@"
450 INK 0,0:PAPER 0:BORDER 0:INK 1,6:INK 2,18,15:INK 3,12:PEN 1:MODE 1
460 WINDOW 1,40,3,25
470 X=10:Y=10:D=4
480 A$=STRING$(40,"[")
490 PEN 1:PRINT A$;:FOR A=1 TO 20
500 PEN 1:PRINT"[";:PEN 2:PRINT STRING$(38,"\");:PEN 1:PRINT"[";
```

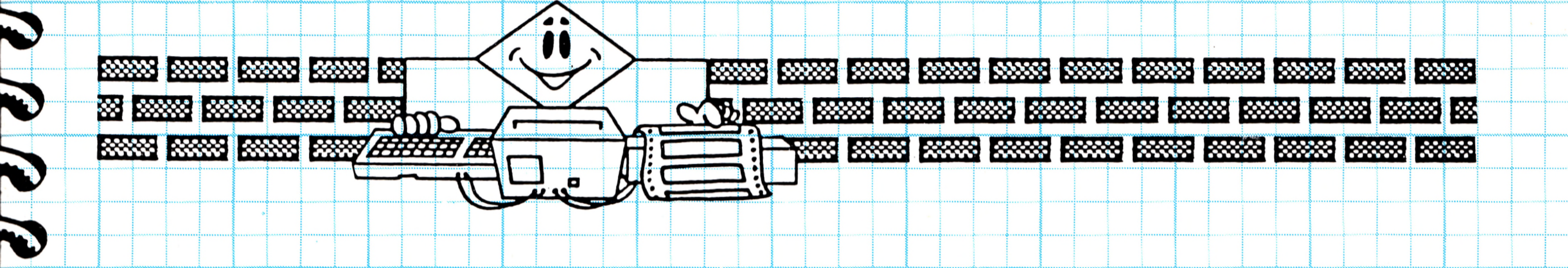
```
510 NEXT A:PRINT A$;
520 GOSUB 710
530 ENT 1,5,-1,1
540 IF INKEY(67)=0 THEN D=1
550 IF INKEY(69)=0 THEN D=2
560 IF INKEY(34)=0 THEN D=3
570 IF INKEY(27)=0 THEN D=4
580 X=X+(1 AND D=2)-(1 AND D=1):Y=Y+(1 AND D=4)-(1 AND D=3)
590 LOCATE Y,X:CALL 30000:C=PEEK(29999)
600 IF C=92 THEN SOUND 1,100,5,15,0,1:P=P+5:GOSUB 740
610 IF C=91 OR C=64 THEN GOSUB 640
620 LOCATE Y,X:PEN 3:PRINT"@"
630 GOTO 540
640 REM ::: PIERDE VIDA :::
650 V$=MID$(V$,2,3)
660 FOR A=100 TO 1 STEP -2:SOUND 2,A,1,15,0,0,31:NEXT A
670 GOSUB 710
680 X=1+INT(RND*20):Y=1+INT(RND*39)
690 LOCATE Y,X:CALL 30000:IF PEEK(29999)=92 THEN RETURN
700 GOTO 680
710 PEN#1,1:LOCATE #1,1,1:PRINT#1,"PUNTOS:";USING "######";P:PEN#1,3:LOCATE #1,3
0,1:PRINT #1,V$;" ";
720 IF LEN(V$)=0 THEN PEN#1,2:PRINT#1,"R.I.P.":GOTO 850
730 RETURN
740 PEN#1,1:LOCATE #1,8,1:PRINT#1,USING "######";P:RETURN
750 REM ** CODE SCREEN$ **
760 DATA 205,96,187,50,47,117,201
770 RESTORE 760
780 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
790 GOTO 800
800 SYMBOL AFTER 32
810 SYMBOL 64,60,102,223,191,191,255,126,60
820 SYMBOL 92,0,0,24,44,60,24,0,0
830 SYMBOL 91,0,239,239,239,0,254,254,254
840 RETURN
850 REM *** GAME OVER ***
860 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
870 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
880 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
890 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "######";P
900 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
910 FOR A=1 TO 50:A$=INKEY$:NEXT A
920 PEN 1
930 IF INKEY(60)=0 THEN RUN 250
940 IF INKEY(46)=0 THEN CALL 0
950 GOTO 930
```



DIBUJO

```
10 REM ******** DIBUJO ********
20 REM * ANGEL GARCIA DELGADO *
30 REM ******* G.T.S. *********
40 REM
50 m=1:GOSUB 430:GOSUB 620
```

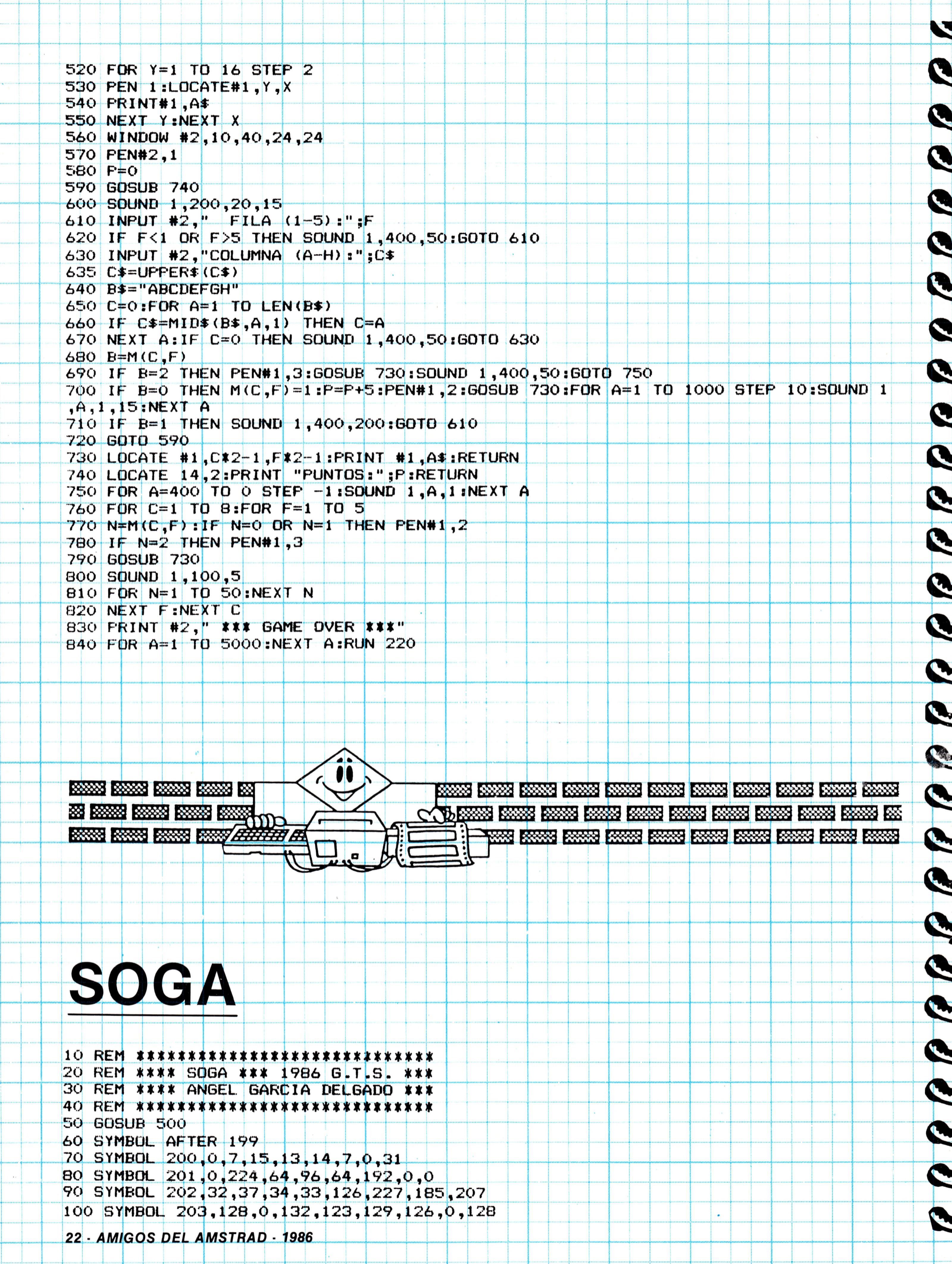
```
60 FOR A=0 TO 15:INK A,A:NEXT A
70 PAPER 0:BORDER 0:INK 1,26:MODE m
80 n=(1 AND m=2)+(2 AND m=1)+(4 AND m=0):I=1:INK 1,26:PEN 1
90 ORIGIN 0,0
100 METE=20100:SACA=20150
110 X=320:Y=210:xb=x:yb=y
120 IF INKEY(0)=0 OR INKEY(72)=0 THEN Y=Y+2
130 IF INKEY(2)=0 OR INKEY(73)=0 THEN Y=Y-2
140 IF INKEY(8)=0 OR INKEY(74)=0 THEN X=X-n
150 IF INKEY(1)=0 OR INKEY(75)=0 THEN X=X+n
160 CALL &BC59,1:TAG:MOVE X,Y:PRINT CHR$(160);:MOVE X,Y:PRINT CHR$(160);:CALL &B
C59:TAGOFF
170 IF INKEY(71)=0 OR INKEY(76)=0 THEN PLOT X-n,Y-8:xb=x-n:yb=y-8
180 IF INKEY(47)=0 THEN PLOT xb,yb:DRAW X-n,Y-8:xb=x-n:yb=y-8
190 IF INKEY(68)=0 THEN GOSUB 210
200 GOTO 120
210 CALL mete:FOR a=1 TO 20:a$=INKEY$:NEXT a:WINDOW #0,1,20,20,25
220 CLS:INPUT "COMANDO:";C$
230 c$=UPPER$(c$)
240 B$=MID$(C$,1,2):A$=MID$(C$,3,LEN(C$)-2)
250 PRINT"OK.";B$;",";A$
260 FOR A=1 TO 800:NEXT A
270 IF B$="SA" THEN CALL SACA:SAVE A$,B,49152,16384:SOUND 1,200:CALL METE
280 IF B$="LD" THEN LOAD A$,49152:SOUND 1,100:CALL METE
290 IF B$="MO" THEN M=VAL(A$):MODE M:n=(1 AND m=2)+(2 AND m=1)+(4 AND m=0)
300 IF B$="BO" THEN BORDER VAL(A$)
310 IF b$="TI" THEN MOVE X,Y,VAL(A$)
320 IF B$="DT" THEN INPUT "COLOR:";CO:INK VAL(A$),CO
330 IF B$="CI" THEN R=VAL(A$):GOSUB 380
340 IF B$="CL" THEN CALL SACA:CLG:CALL METE
350 IF b$="IN" THEN GOSUB 430
360 REM
370 CALL SACA:RETURN
380 REM -CIRCULO-
390 CALL SACA:DEG:XO=X-N:YO=Y-8:ORIGIN XO,YO:FOR A=0 TO 360 STEP 10
400 B=A-10:PLOT R*COS(B),R*SIN(B)
410 DRAW R*COS(A),R*SIN(A)
420 NEXT A:ORIGIN 0,0:CALL METE:RETURN
430 PEN 1:INK 1,26:MODE 2
440 PRINT"--- DIBUJO --- AUTOR: ANGEL GARCIA DELGADO --- G.T.S. --- 1986 -------
---------"
450 PRINT:PRINT"* MOVIMIENTO LAPIZ, CON LAS TECLAS DEL CURSOR"
460 PRINT:PRINT"* Z. DIBUJA UN PUNTO"
470 PRINT:PRINT"* SPACE. TRAZA UNA LINEA DESDE EL ULTIMO PTO. TRAZADO HASTA LA P
OSICION ACTUAL"
480 PRINT:PRINT"* TAB. ACCEDE AL MODO COMANDO, DONDE DISPONES DE LAS SIGUIENTES
INSTRUCCIONES:"
490 PRINT:PRINT"-       MO X. FIJAR EL MODO DE PANTALLA (0,1 o 2)"
500 PRINT"       TI X. SALECCIONA LA TINTA EN CURSO (0-15),(0=BORRAR)"
510 PRINT"       CI X. TRAZA UN CIRCULO, CON CENTRO EN EL CURSOR Y RADIO X"
520 PRINT"       DT X. DEFINE EL TINTERO DE LA PLUMA X"
530 PRINT"       SA NOMBRE. GRABA LA PANTALLA CON EL NOMBRE 'NOMBRE'"
540 PRINT"       LD NOMBRE. CARGA UNA PANTALLA"
550 PRINT"       CL. BORRA LA PANTALLA"
560 PRINT"       BO X. PONE EL BORDE DEL COLOR X"
570 PRINT"       IN. IMPRIME ESTA PAGINA DE INSTRUCCIONES"
580 REM
590 PRINT:PRINT:PRINT"-------------------  PULSA -S- PARA CONTINUAR -------------
-------------------------------"
600 IF INKEY(60)<>0 THEN 600
610 MODE M:RETURN
620 REM SUBRUTINAS C.M.: S-9000 L-9045 I-20100 O-20150
630 DATA 17,0,79,33,0,192,1,0,64,237,176,201
640 RESTORE 630:FOR a=20100 TO 20111:READ b:POKE a,b:NEXT a
650 DATA 17,0,192,33,0,79,1,0,64,237,176,201
660 RESTORE 650:FOR a=20150 TO 20161:READ b:POKE a,b:NEXT a
670 SYMBOL AFTER 160:SYMBOL 160,0,0,15,63,227,63,15,0
680 RETURN
```



LA MANZANA ENVENENADA

```
      ** LA MANZANA ENVENENADA ***
20 REM *** ANGEL GARCIA DELGADO ****
30 REM *********** G.T.S. ***********
40 REM
50 SYMBOL AFTER 160
60 SYMBOL 160,60,6,59,113,1,29,63,103
70 SYMBOL 161,0,0,0,0,0,120,252,254
80 SYMBOL 162,111,95,95,127,127,63,30
90 SYMBOL 163,254,254,254,254,254,252,120,0
100 MODE 0:INK 0,24:INK 1,0:INK 2,6:INK 3,18
110 BORDER 24:PAPER 0:CLS
120 ORIGIN 320,200
140 FOR A=0 TO 2*PI STEP PI/50
150 PLOT 0,0,3:DRAWR COS(A)*300,SIN(A)*180
160 NEXT A
170 PRINT CHR$(22)+CHR$(1)
180 PEN 1
190 LOCATE 8,13:PRINT"MANZANA"
200 FOR A=1 TO 1000 STEP 4:SOUND 1,A,1,15,0,0,31:NEXT A
210 INK 3,18,24
220 FOR A=1 TO 1000 STEP 5:SOUND 1,A,1,15:SOUND 2,A+10,1,15:SOUND 3,1000-A,1,15:
NEXT A
230 a$=CHR$(160)+CHR$(161)+CHR$(10)+CHR$(8)+CHR$(8)+CHR$(162)+CHR$(163)
240 INK 3,18
250 MODE 1
260 PEN 1
270 PRINT "<< LA MANZANA ENVENENADA >> << A.G.D. >>"
280 PRINT:PRINT:PRINT"VE COMIENDOTE LAS MANZANAS DEL CESTO..."
290 PRINT:PRINT"PERO SOLO LAS MADURAS, YA QUE SI MUERDES"
300 PRINT"UNA QUE ESTE VERDE PERDERAS!!!."
310 PRINT:PRINT:PRINT"PARA ELEGIR LAS MANZANAS INTRODUCE"
320 PRINT:PRINT"PRIMERAMENTE LA FILA, Y LUEGO LA COLUMNA"
330 FOR A=1 TO 39 STEP 4:PEN 2:LOCATE A,20:PRINT A$;:PEN 3:PRINT A$:NEXT A
340 INK 2,6,18:INK 3,18,6
350 IF INKEY$="" THEN 350
360 INK 2,6:INK 3,18
370 MODE 1:P=0:DIM M(8,5)
380 PEN 1
390 FOR A=1 TO 10:M(1+INT(RND*8),1+INT(RND*5))=2
400 NEXT A
420 MODE 1
430 ORIGIN 0,200
440 PLOT 0,150,1:DRAWR 700,0
450 PLOT 0,-150:DRAWR 700,0
460 WINDOW #1,12,35,9,19
470 PEN#1,1
480 LOCATE 12,7:PRINT"A B C D E F G H"
490 B$="1 2 3 4 5 "
500 FOR X=1 TO 10 STEP 2
510 PEN 1:LOCATE 10,X+9:PRINT MID$(B$,X,1)
```

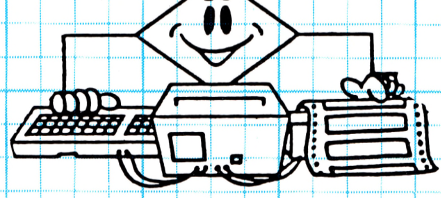
```
520 FOR Y=1 TO 16 STEP 2
530 PEN 1:LOCATE#1,Y,X
540 PRINT#1,A$
550 NEXT Y:NEXT X
560 WINDOW #2,10,40,24,24
570 PEN#2,1
580 P=0
590 GOSUB 740
600 SOUND 1,200,20,15
610 INPUT #2,"  FILA (1-5):";F
620 IF F<1 OR F>5 THEN SOUND 1,400,50:GOTO 610
630 INPUT #2,"COLUMNA (A-H):";C$
635 C$=UPPER$(C$)
640 B$="ABCDEFGH"
650 C=0:FOR A=1 TO LEN(B$)
660 IF C$=MID$(B$,A,1) THEN C=A
670 NEXT A:IF C=0 THEN SOUND 1,400,50:GOTO 630
680 B=M(C,F)
690 IF B=2 THEN PEN#1,3:GOSUB 730:SOUND 1,400,50:GOTO 750
700 IF B=0 THEN M(C,F)=1:P=P+5:PEN#1,2:GOSUB 730:FOR A=1 TO 1000 STEP 10:SOUND 1
,A,1,15:NEXT A
710 IF B=1 THEN SOUND 1,400,200:GOTO 610
720 GOTO 590
730 LOCATE #1,C*2-1,F*2-1:PRINT #1,A$:RETURN
740 LOCATE 14,2:PRINT "PUNTOS:";P:RETURN
750 FOR A=400 TO 0 STEP -1:SOUND 1,A,1:NEXT A
760 FOR C=1 TO 8:FOR F=1 TO 5
770 N=M(C,F):IF N=0 OR N=1 THEN PEN#1,2
780 IF N=2 THEN PEN#1,3
790 GOSUB 730
800 SOUND 1,100,5
810 FOR N=1 TO 50:NEXT N
820 NEXT F:NEXT C
830 PRINT #2," *** GAME OVER ***"
840 FOR A=1 TO 5000:NEXT A:RUN 220
```

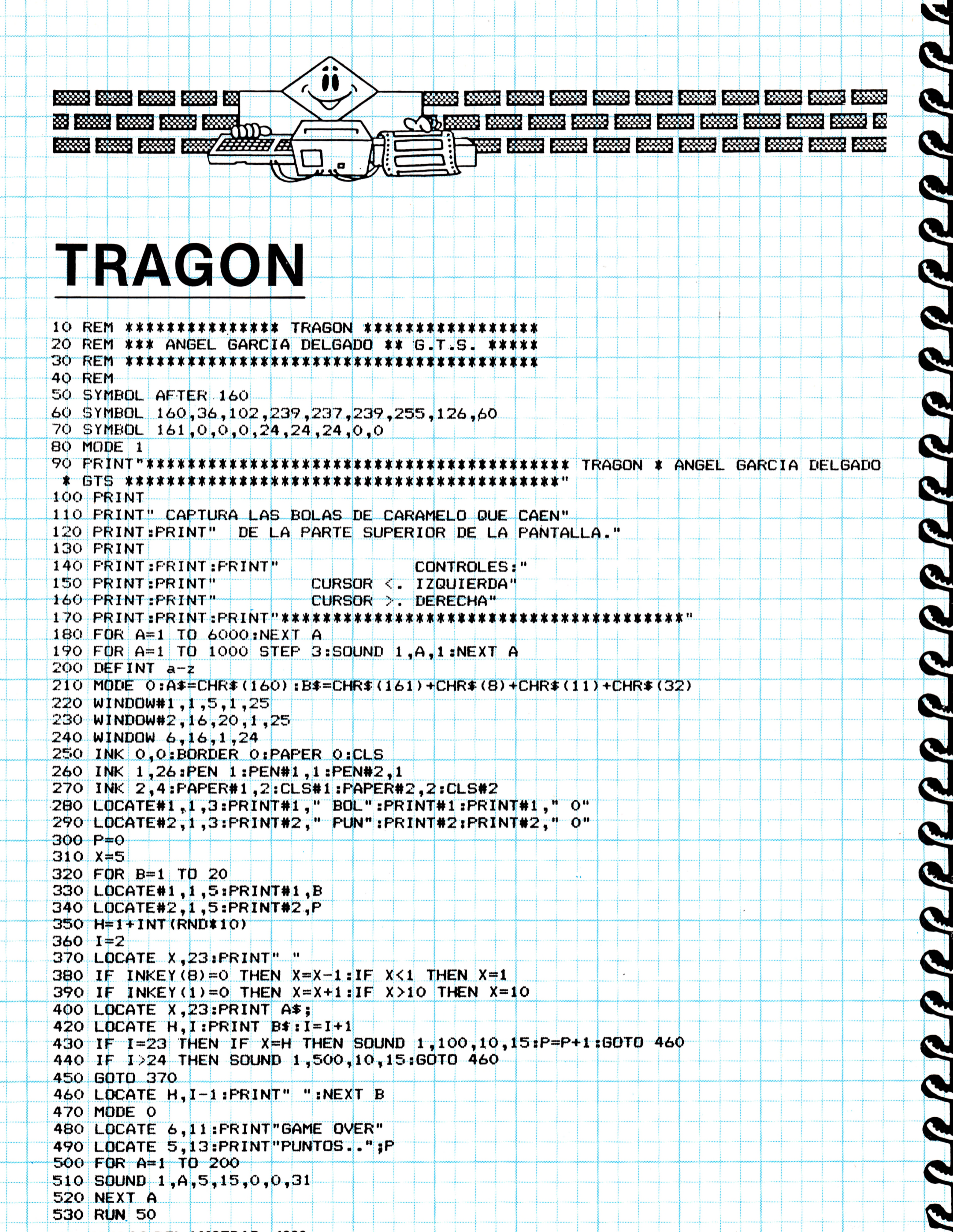


SOGA

```
10 REM ********************************
20 REM **** SOGA *** 1986 G.T.S. ***
30 REM **** ANGEL GARCIA DELGADO ***
40 REM ********************************
50 GOSUB 500
60 SYMBOL AFTER 199
70 SYMBOL 200,0,7,15,13,14,7,0,31
80 SYMBOL 201,0,224,64,96,64,192,0,0
90 SYMBOL 202,32,37,34,33,126,227,185,207
100 SYMBOL 203,128,0,132,123,129,126,0,128
```

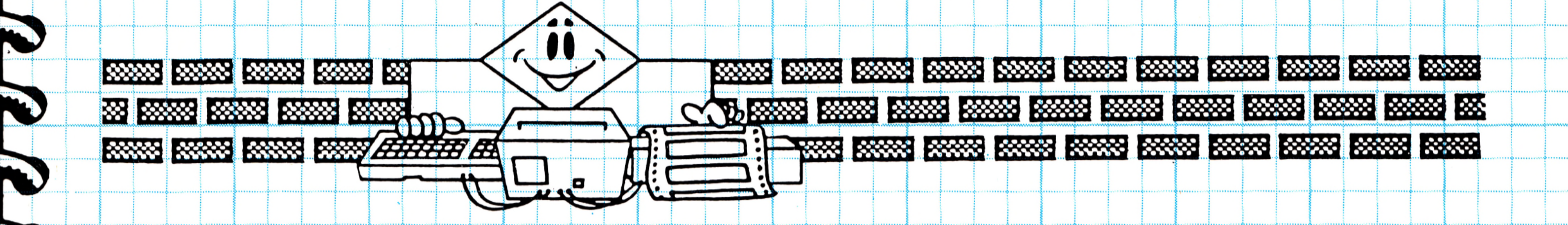
```
110 SYMBOL 204,192,195,225,80,48,104,161,3
120 SYMBOL 205,0,160,208,232,104,208,232,244
130 SYMBOL 206,0,7,2,6,2,3,0,0
140 SYMBOL 207,0,224,240,176,112,224,0,248
150 SYMBOL 208,1,0,97,222,129,126,0,1
160 SYMBOL 209,4,164,68,132,126,199,157,243
170 SYMBOL 210,0,5,11,23,22,11,23,47
180 SYMBOL 211,3,195,135,10,12,22,133,192
190 SYMBOL 212,0,0,0,119,238,0,0,0
200 BORDER 26:MODE 1:INK 0,26:INK 1,0:INK 2,15:INK 3,3
210 WINDOW #1,2,39,2,2:PEN #1,1:PAPER #1,0:CLS #1
220 PAPER 0:PEN 1
230 A$=" "+CHR$(200)+CHR$(201)+"           "+CHR$(206)+CHR$(207)+" "
240 C$="":FOR A=1 TO 9:C$=C$+CHR$(212):NEXT
250 B$=" "+CHR$(202)+CHR$(203)+C$+CHR$(208)+CHR$(209)+" "
260 C$=" "+CHR$(204)+CHR$(205)+"           "+CHR$(210)+CHR$(211)+" "
270 T=2:LOCATE 1,5:FOR A=1 TO 200:PRINT CHR$(231);:PEN T:T=T+1:IF T>3 THEN T=2
280 NEXT A
290 PLOT 0,145:DRAWR 0,100:DRAWR 630,0:DRAWR 0,-100:DRAWR -630,0
300 FOR A=0 TO 130 STEP 4:PLOT 0,a:DRAWR 630,0:NEXT a
310 PLOT 0,399:DRAWR 633,0:DRAWR 0,-40:DRAWR -633,0:DRAWR 0,40
320 PEN 1
330 PRINT #1,"           PREPARADOS...":SOUND 1,478,100,15
340 FOR A=1 TO 1000:NEXT
350 PRINT #1,"             LISTOS...":SOUND 1,400,100,15
360 FOR A=1 TO 1000:NEXT
370 PRINT #1,"         !!!!! ADELANTE !!!!!"
380 SOUND 1,100,50,15
390 x=12
400 IF INKEY(67)=0 THEN X=X-1:IF X=4 THEN G=1:GOTO 450
410 LOCATE X,13:PRINT A$:LOCATE X,14:PRINT B$:LOCATE X,15:PRINT C$
420 IF INKEY(27)=0 THEN X=X+1:IF X>19 THEN G=2:GOTO 450
430 LOCATE X,13:PRINT A$:LOCATE X,14:PRINT B$:LOCATE X,15:PRINT C$
440 GOTO 400
450 PRINT #1,"          GANA EL JUGADOR";G
460 INK 2,15,3:INK 3,3,15
470 FOR A=0 TO 500 STEP 2:SOUND 1,A,1,15:A$=INKEY$:NEXT A
480 IF INKEY$=""THEN 480
490 RUN 60
500 INK 0,26:INK 1,0,8:INK 2,1
510 BORDER 26:MODE 0
520 PEN 1
530 PRINT "******* SOGA *******"
540 PEN 2:PRINT" ":PRINT"TIRA DE LA SOGA !!!"
550 PRINT" ":PRINT" GANARA EL JUGADOR"
560 PRINT" ":PRINT"QUE SE LLEVE LA SOGA"
570 PRINT" ":PRINT" ":PRINT"  Q. JUG IZQUIERDA"
580 PRINT" ":PRINT"  P. JUG. DERECHA"
590 PEN 1:PRINT" ":PRINT" ":PRINT"********************"
600 PEN 2:PRINT" ":PRINT" ":PRINT"   ANGEL GARCIA D."
610 FOR B=1 TO 2
620 FOR A=1 TO 500
630 SOUND 1,A,1,15
640 SOUND 2,A+10,1,15
650 SOUND 3,500-A,1,15
660 NEXT A
670 NEXT B:RETURN
```





TRAGON

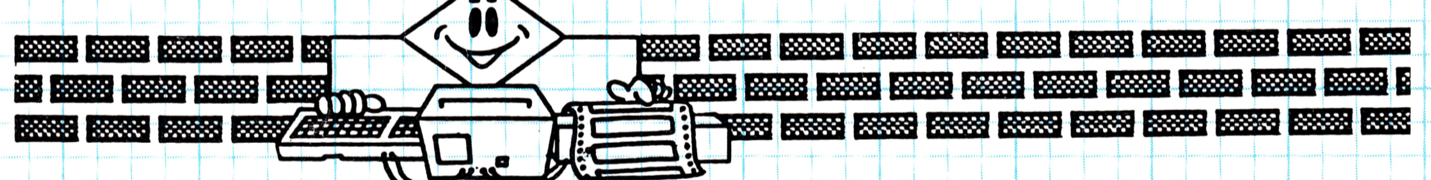
```
10 REM *************** TRAGON *****************
20 REM *** ANGEL GARCIA DELGADO ** G.T.S. *****
30 REM ****************************************
40 REM
50 SYMBOL AFTER 160
60 SYMBOL 160,36,102,239,237,239,255,126,60
70 SYMBOL 161,0,0,0,24,24,24,0,0
80 MODE 1
90 PRINT"**************************************** TRAGON * ANGEL GARCIA DELGADO
 * GTS ****************************************"
100 PRINT
110 PRINT" CAPTURA LAS BOLAS DE CARAMELO QUE CAEN"
120 PRINT:PRINT"  DE LA PARTE SUPERIOR DE LA PANTALLA."
130 PRINT
140 PRINT:PRINT:PRINT"                 CONTROLES:"
150 PRINT:PRINT"          CURSOR <. IZQUIERDA"
160 PRINT:PRINT"          CURSOR >. DERECHA"
170 PRINT:PRINT:PRINT"****************************************"
180 FOR A=1 TO 6000:NEXT A
190 FOR A=1 TO 1000 STEP 3:SOUND 1,A,1:NEXT A
200 DEFINT a-z
210 MODE 0:A$=CHR$(160):B$=CHR$(161)+CHR$(8)+CHR$(11)+CHR$(32)
220 WINDOW#1,1,5,1,25
230 WINDOW#2,16,20,1,25
240 WINDOW 6,16,1,24
250 INK 0,0:BORDER 0:PAPER 0:CLS
260 INK 1,26:PEN 1:PEN#1,1:PEN#2,1
270 INK 2,4:PAPER#1,2:CLS#1:PAPER#2,2:CLS#2
280 LOCATE#1,1,3:PRINT#1," BOL":PRINT#1:PRINT#1," O"
290 LOCATE#2,1,3:PRINT#2," PUN":PRINT#2:PRINT#2," O"
300 P=0
310 X=5
320 FOR B=1 TO 20
330 LOCATE#1,1,5:PRINT#1,B
340 LOCATE#2,1,5:PRINT#2,P
350 H=1+INT(RND*10)
360 I=2
370 LOCATE X,23:PRINT" "
380 IF INKEY(8)=0 THEN X=X-1:IF X<1 THEN X=1
390 IF INKEY(1)=0 THEN X=X+1:IF X>10 THEN X=10
400 LOCATE X,23:PRINT A$;
420 LOCATE H,I:PRINT B$:I=I+1
430 IF I=23 THEN IF X=H THEN SOUND 1,100,10,15:P=P+1:GOTO 460
440 IF I>24 THEN SOUND 1,500,10,15:GOTO 460
450 GOTO 370
460 LOCATE H,I-1:PRINT" ":NEXT B
470 MODE 0
480 LOCATE 6,11:PRINT"GAME OVER"
490 LOCATE 5,13:PRINT"PUNTOS..";P
500 FOR A=1 TO 200
510 SOUND 1,A,5,15,0,0,31
520 NEXT A
530 RUN 50
```



AS DE CORAZONES

```
10 REM ****** AS DE CORAZONES ******
20 REM *** ANGEL GARCIA DELGADO ****
30 REM ********* G.T.S. ************
40 REM
50 MODE 0:INK 0,26:INK 1,0:INK 2,8
60 PAPER 0:BORDER 26:PEN 1:CLS
70 ORIGIN 316,200
80 DEG
90 FOR A=0 TO 360 STEP 5
100 PLOT 250*COS(A),40*SIN(A),2
110 DRAWR 50*COS(A),110*SIN(A)
120 SOUND 1,A,1,15
130 NEXT A
140 PRINT CHR$(22)+CHR$(1)
150 PEN 1
160 TAG
170 PLOT -235,6,1:PRINT "AS DE CORAZONES";:TAGOFF
180 INK 2,8,26
190 FOR A=0 TO 500
200 SOUND 1,A,1,15
210 SOUND 2,A+5,1,15
220 SOUND 3,500-A,1,15
230 NEXT A
240 FOR A=0 TO 1000:NEXT A
250 MODE 1
260 PRINT "****** AS DE CORAZONES **** A.G.D. *****"
270 PRINT " ":PRINT"   DESCUBRE CUAL DE ESTAS CARTAS ES"
280 PRINT" ":PEN 2:PRINT"             EL AS DE CORAZONES"
290 PEN 1:PRINT" "
300 PRINT "      PARA ELEGIRLA PULSA 1,2 o 3"
310 LOCATE 11,21:PRINT"1         2         3"
320 GOSUB 560
330 AC=0:FA=0:GOSUB 770
340 FOR N=1 TO 3:GOSUB 600:NEXT N
350 FOR A=1 TO 25:SOUND 1,100+RND*10,1,15:FOR B=1 TO RND*200:NEXT B:T$=INKEY$:NE
XT A
360 S=1+INT(RND*3)
370 IF S=1 THEN B$=CHR$(228):E$=CHR$(227):D$=CHR$(229)
380 IF S=2 THEN E$=CHR$(228):B$=CHR$(227):D$=CHR$(229)
390 IF S=3 THEN D$=CHR$(228):B$=CHR$(227):E$=CHR$(229)
400 SOUND 1,200,20,15
410 T$=INKEY$:IF T$="" THEN 410
420 IF T$<>"1" AND T$<>"2" AND T$<>"3" THEN SOUND 1,800,20,15:GOTO 410
430 T=VAL(T$)
440 N=T:IF T=1 THEN A$=B$
450 IF T=2 THEN A$=E$
460 IF T=3 THEN A$=D$
470 GOSUB 660:SOUND 1,20,20,15
480 FOR A=1 TO 500:NEXT A
490 IF T=S THEN GOSUB 880
500 IF T<>S THEN GOSUB 910
510 GOSUB 770
520 A$=B$:N=1:GOSUB 660
```

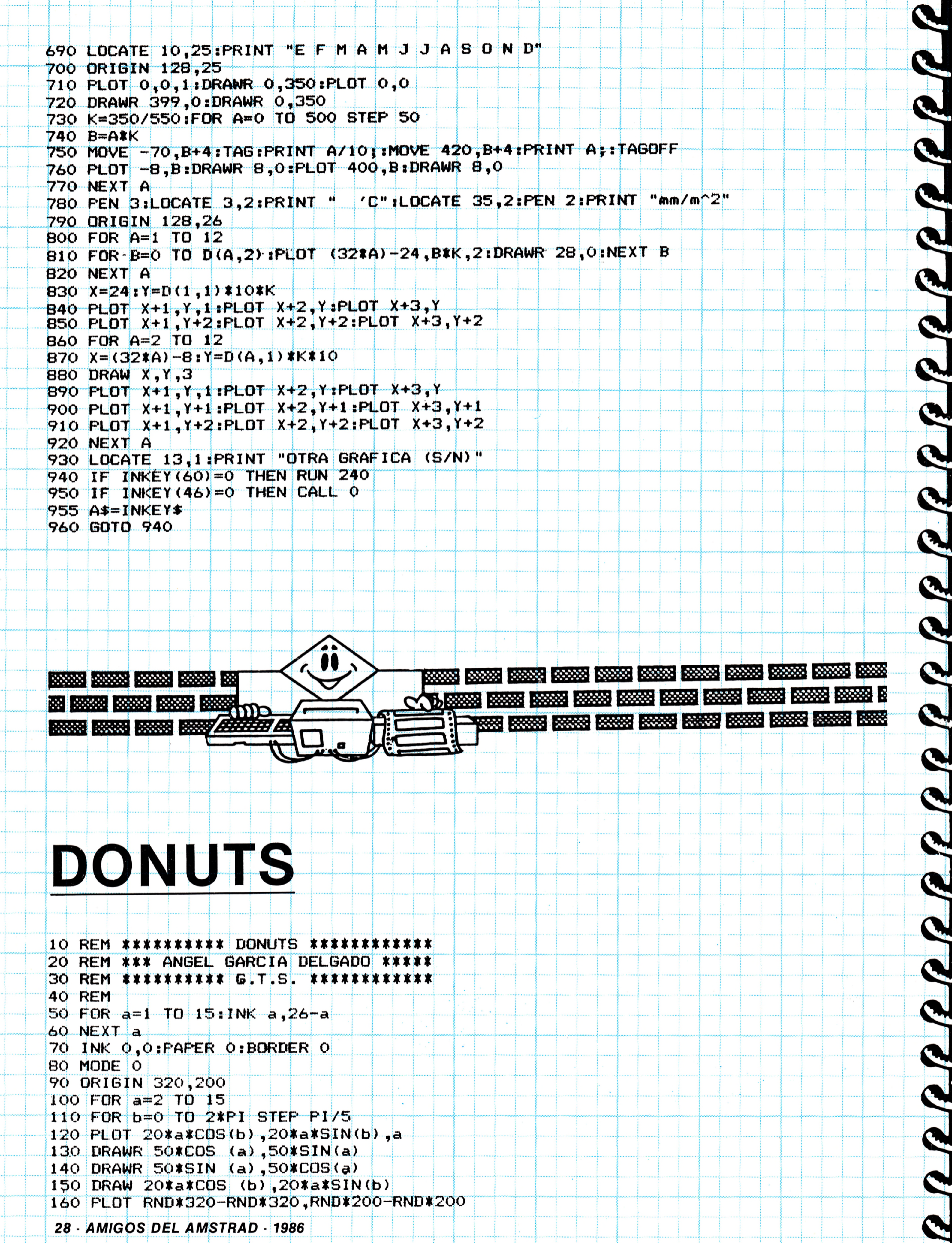
```
530 A$=E$:N=2:GOSUB 660
540 A$=D$:N=3:GOSUB 660
550 FOR A=1 TO 1500:NEXT A:GOTO 340
560 WINDOW #1,8,15,10,19
570 WINDOW #2,17,24,10,19
580 WINDOW #3,26,33,10,19
590 RETURN
600 LOCATE #N,1,1:PRINT #N,CHR$(150);CHR$(154);CHR$(154);CHR$(154);CHR$(154);CHR
$(154);CHR$(156)
610 C$=CHR$(149)+CHR$(207)+CHR$(207)+CHR$(207)+CHR$(207)+CHR$(207)+CHR$(149)
620 PRINT #N,C$:PRINT #N,C$:PRINT #N,C$:PRINT #N,C$:PRINT #N,C$:PRINT #N,C$:PRIN
T #N,C$:PRINT #N,C$
630 PRINT #N,CHR$(147);CHR$(154);CHR$(154);CHR$(154);CHR$(154);CHR$(154);CHR$(15
3)
640 SOUND 1,200,5,15
650 RETURN
660 LOCATE #N,1,1:PRINT #N,CHR$(150);CHR$(154);CHR$(154);CHR$(154);CHR$(154);CHR
$(154);CHR$(156)
670 PRINT#N,CHR$(149);"1";"     "+CHR$(149)
680 PRINT#N,CHR$(149);A$;"     "+CHR$(149)
690 PRINT#N,CHR$(149)+"      "+CHR$(149)
700 PRINT#N,CHR$(149)+"      "+CHR$(149)
710 PRINT#N,CHR$(149)+"      "+CHR$(149)
720 PRINT#N,CHR$(149)+"      "+CHR$(149)
730 PRINT#N,CHR$(149);"     ";A$;CHR$(149)
740 PRINT#N,CHR$(149);"     ";"1";CHR$(149)
750 SOUND 1,100,5,15
760 RETURN
770 LOCATE 6,25:PRINT"ACIERTOS:";AC:LOCATE 23,25:PRINT"FALLOS:";FA
780 IF FA>4 THEN GOTO 800
790 RETURN
800 REM *** FINAL ***
810 FOR A=0 TO 1000:SOUND 1,A,1:NEXT A
820 MODE 0
830 PEN 2
840 INK 2,15,8
850 LOCATE 6,12:PRINT"GAME OVER"
860 FOR A=1 TO 5000:NEXT A
870 RUN
880 AC=AC+1
890 FOR B=1 TO 10:FOR A=0 TO 26:SOUND 1,A,1,15:NEXT A:NEXT B
900 RETURN
910 FA=FA+1
920 SOUND 1,500,50,15
930 FOR A=500 TO 700:SOUND 1,A,1,15:NEXT A:RETURN
```



CLIMOGRAMA

```
10 REM ********** CLIMOGRAMA ***********
20 REM *** ANGEL GARCIA DELGADO ********
30 REM ***********  G.T.S.  ************
```

```
40 REM
50 MODE 0:INK 0,26:INK 1,0:INK 2,8
60 PAPER 0:BORDER 26:PEN 1:CLS
70 ORIGIN 316,200
80 DEG
90 FOR A=0 TO 360 STEP 5
100 PLOT 170*COS(A),40*SIN(A),2
110 DRAWR 100*COS(A),80*SIN(A)
120 SOUND 1,A,1,15
130 NEXT A
140 PRINT CHR$(22)+CHR$(1)
150 PEN 1
160 LOCATE 6,13:PRINT "CLIMOGRAMA"
170 INK 2,8,26
180 FOR A=0 TO 500
190 SOUND 1,A,1,15
200 SOUND 2,A+5,1,15
210 SOUND 3,500-A,1,15
220 NEXT A
230 FOR A=0 TO 1000:NEXT A
240 MODE 1
250 PEN 1:PRINT "   ESTE PROGRAMA DIBUJA UNA GRAFICA"
260 PRINT" ":PRINT"      (";:PEN 2:PRINT"CLIMOGRAMA";:PEN 1:PRINT") CON LAS LLUVI
AS"
270 PRINT" ":PRINT"    Y TEMPERATURAS DE TODO EL ANNO"
280 PRINT" ":PRINT" ":PRINT"   EL GRAFICO DE BARRAS REPRESENTA"
290 PRINT" ":PRINT" LAS PRECIPITACIONES EN mm/m^2 (ROJO)"
300 PRINT" ":PRINT" ":PRINT" EL GRAFICO DE LINEAS (AZUL) REPRESENTA"
310 PRINT" ":PRINT" LAS TEMPERATURAS EN GRADOS CENTIGRADOS"
320 PRINT " ":PRINT " ":PRINT" ":PEN 2:PRINT "     INTRODUCE LOS DATOS. POR FAVOR
."
330 PEN 1:WINDOW #1,1,40,23,25
340 DIM D(12,2)
350 DATA ENERO,FEBRERO,MARZO,ABRIL,MAYO,JUNIO,JULIO,AGOSTO,SEPTIEMBRE,OCTUBRE,NO
VIEMBRE,DICIEMBRE
360 RESTORE 350
370 CLS#1:PRINT#1," ":PRINT#1,"************* TEMPERATURAS *************"
380 SOUND 1,200,100,15
390 FOR A=1 TO 1500:NEXT A
400 FOR A=1 TO 12:READ M$
410 CLS #1:PRINT #1,"TEMPERATURA DEL MES DE ";M$:PRINT#1," "
420 INPUT #1,D(A,1):IF D(A,1)<0 OR D(A,1)>55 THEN SOUND 1,478,50,15:GOTO 410
430 SOUND 1,200,5,15
440 NEXT A
450 CLS#1:PRINT#1," ":PRINT#1,"*********** PRECIPITACIONES ************"
460 SOUND 1,100,200,15:FOR A=1 TO 1500:NEXT A
470 RESTORE 350:FOR A=1 TO 12:READ M$
480 CLS#1:PRINT#1,"PRECIPITACIONES MES DE ";M$
490 PRINT#1," ":INPUT#1,D(A,2)
500 IF D(A,2)<0 OR D(A,2)>550 THEN SOUND 1,478,50,15:GOTO 480
510 NEXT A
520 MODE 1:INK 1,0:INK 2,6:INK 3,14
530 PEN 2:PRINT"MES:         TEMPERATURA: PRECIPITACIONES:"
540 PEN 1
550 RESTORE 350
560 M=0:P=0
570 FOR A=1 TO 12
580 READ M$:PRINT M$;TAB(13);D(A,1);TAB(26);D(A,2)
590 M=M+D(A,1):P=P+D(A,2)
600 NEXT A
610 PRINT " ":PEN 2:PRINT "MEDIA ANUAL: ";M/12
620 PRINT " "
630 PEN 3:PRINT "TOTAL PRECIPITACIONES: ";P
640 PRINT " ":PRINT" ":PRINT"PULSA -G- PARA VER LA GRAFICA >>>"
650 IF INKEY(52)<>0 THEN 650
660 SOUND 1,100,50,15
670 MODE 1
680 PEN 1
```



```
690 LOCATE 10,25:PRINT "E F M A M J J A S O N D"
700 ORIGIN 128,25
710 PLOT 0,0,1:DRAWR 0,350:PLOT 0,0
720 DRAWR 399,0:DRAWR 0,350
730 K=350/550:FOR A=0 TO 500 STEP 50
740 B=A*K
750 MOVE -70,B+4:TAG:PRINT A/10;:MOVE 420,B+4:PRINT A;:TAGOFF
760 PLOT -8,B:DRAWR 8,0:PLOT 400,B:DRAWR 8,0
770 NEXT A
780 PEN 3:LOCATE 3,2:PRINT "   'C":LOCATE 35,2:PEN 2:PRINT "mm/m^2"
790 ORIGIN 128,26
800 FOR A=1 TO 12
810 FOR B=0 TO D(A,2):PLOT (32*A)-24,B*K,2:DRAWR 28,0:NEXT B
820 NEXT A
830 X=24:Y=D(1,1)*10*K
840 PLOT X+1,Y,1:PLOT X+2,Y:PLOT X+3,Y
850 PLOT X+1,Y+2:PLOT X+2,Y+2:PLOT X+3,Y+2
860 FOR A=2 TO 12
870 X=(32*A)-8:Y=D(A,1)*K*10
880 DRAW X,Y,3
890 PLOT X+1,Y,1:PLOT X+2,Y:PLOT X+3,Y
900 PLOT X+1,Y+1:PLOT X+2,Y+1:PLOT X+3,Y+1
910 PLOT X+1,Y+2:PLOT X+2,Y+2:PLOT X+3,Y+2
920 NEXT A
930 LOCATE 13,1:PRINT "OTRA GRAFICA (S/N)"
940 IF INKEY(60)=0 THEN RUN 240
950 IF INKEY(46)=0 THEN CALL 0
955 A$=INKEY$
960 GOTO 940
```

DONUTS

```
10 REM ********** DONUTS ************
20 REM *** ANGEL GARCIA DELGADO *****
30 REM ********** G.T.S. ************
40 REM
50 FOR a=1 TO 15:INK a,26-a
60 NEXT a
70 INK 0,0:PAPER 0:BORDER 0
80 MODE 0
90 ORIGIN 320,200
100 FOR a=2 TO 15
110 FOR b=0 TO 2*PI STEP PI/5
120 PLOT 20*a*COS(b),20*a*SIN(b),a
130 DRAWR 50*COS (a),50*SIN(a)
140 DRAWR 50*SIN (a),50*COS(a)
150 DRAW 20*a*COS (b),20*a*SIN(b)
160 PLOT RND*320-RND*320,RND*200-RND*200
```

```
170 NEXT b
180 NEXT a
190 LOCATE 8,13:INK 1,26:PEN 1:PRINT CHR$(22)+CHR$(1);"DONUTS"
200 FOR a=2 TO 15
210 IF a>2 THEN INK a-1,0
220 INK a,26-a
230 FOR z=100 TO 200 STEP 10:SOUND 1,z,1,15:NEXT z
240 NEXT a
250 INK 15,0
260 IF INKEY$<>"" THEN GOTO 280
270 GOTO 200
280 INK 1,26:MODE 2:PEN 1
290 WINDOW 1,80,23,25
300 ORIGIN 320,200
310 SOUND 1,200,10
320 INPUT "ANCHURA DEL DONUTS (0-320):";AN
330 INPUT "ALTURA DEL DONUTS (0-150):";AL
340 INPUT "GROSOR (1-150):";G
350 INPUT "CONCENTRACION (1-200):";C
360 CLG
370 DEG
380 FOR M=0 TO 360 STEP C
390 X=AL*SIN(M):Y=AN*COS(M)
400 GOSUB 430
410 NEXT M
420 GOTO 310
430 DEG:MOVE X,Y+G:FOR A=0 TO 400 STEP 10
440 DRAW G*SIN(A)+X,G*COS(A)+Y:NEXT A:RETURN
```

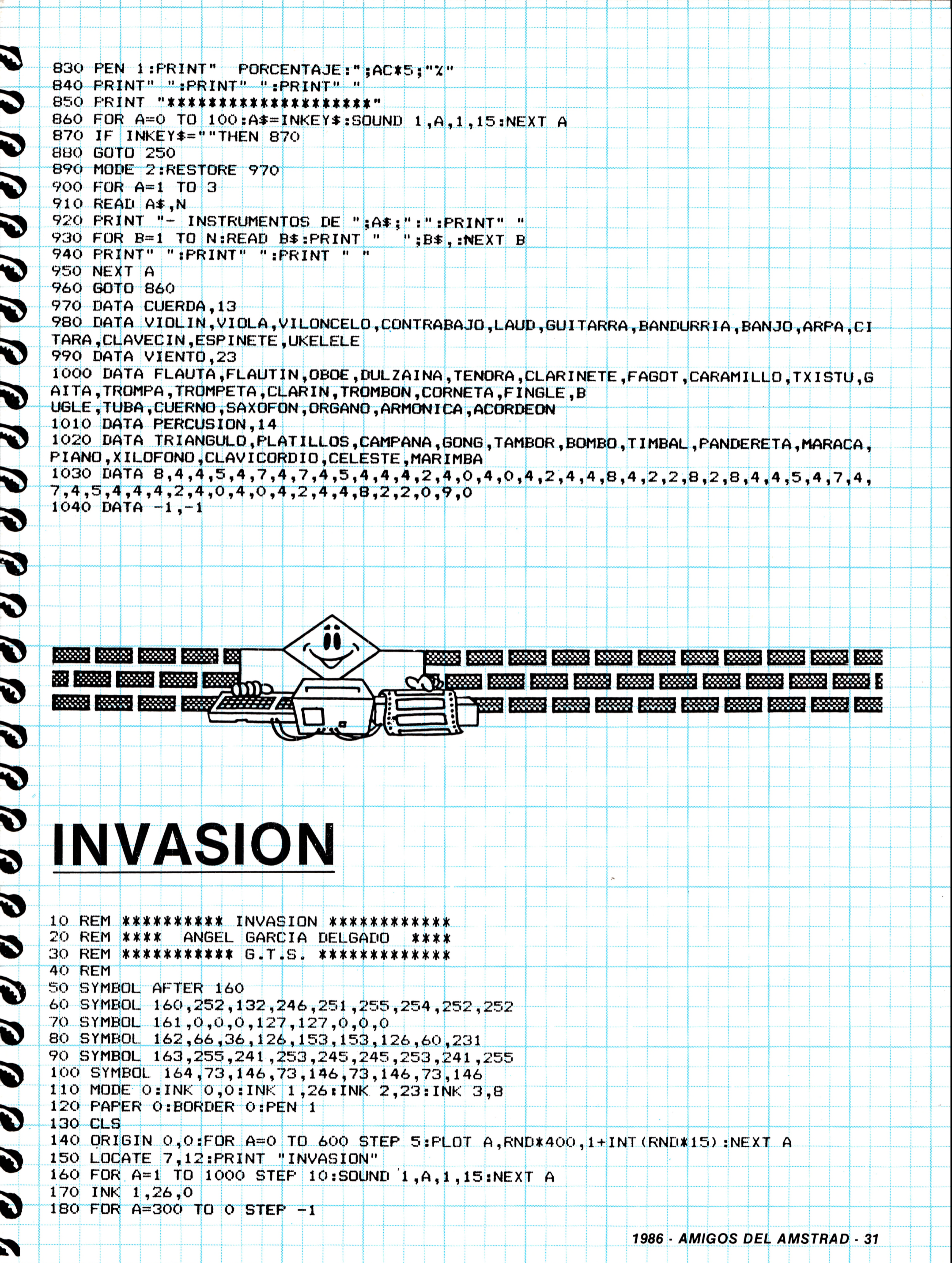


INSTRUMENTOS

```
10 REM ** INSTRUMENTOS **
20 REM *                *
30 REM ** ANGEL GARCIA **
40 REM *                *
50 REM **   G. T. S.   **
60 REM
70 INK 0,0:INK 1,26:INK 2,8
80 BORDER 0:PAPER 0:PEN 1
90 MODE 0
100 ORIGIN 310,200
110 FOR A=0 TO 2*PI STEP PI/50
120 PLOT 0,0,2:DRAW SIN(A)*(150+RND*180),COS(A)*(80+RND*160)
130 NEXT A
140 PRINT CHR$(22);CHR$(1)
150 SPEED INK 30,30
160 LOCATE 5,13:PEN 1:PRINT "INSTRUMENTOS"
170 INK 2,8,0
```

```
180 RESTORE 1030
190 READ A,B:IF A=-1 THEN GOTO 180
200 F=440*(2^(B/12)):T=ROUND(12500/F)
210 SOUND 1,T*5,A*10,15
220 SOUND 2,T*3,A*10,15
230 IF INKEY$<>"" THEN 250
240 GOTO 190
250 REM *** MENU ***
260 MODE 1
270 INK 3,11
280 INK 2,8
300 ORIGIN 0,0:DRAWR 600,0,1:DRAWR 0,399:DRAWR -600,0:DRAWR 0,-399
310 WINDOW 8,32,6,25
320 PRINT " ":PRINT" "
330 PEN 3:PRINT "**** ELIGE TU OPCION ****"
340 PRINT " "
350 PEN 1:PRINT "     1. CUESTIONARIO"
360 PRINT " "
370 PRINT "     2. LISTAR DATOS"
380 PRINT " "
390 PRINT "     3. TERMINAR"
400 PRINT " "
410 PRINT" "
420 PEN 3:PRINT"*************************"
430 IF INKEY(64)=0 THEN GOTO 470
440 IF INKEY(65)=0 THEN GOTO 890
450 IF INKEY(57)=0 THEN CALL 0
460 GOTO 430
470 REM **** CUESTIONARIO ****
480 MODE 1:INK 1,26:INK 2,20:INK 3,8
490 FOR P=1 TO 20
500 MODE 1:PEN 1:PRINT "********** LOS INSTRUMENTOS ***********"
510 N=INT (RND*3)
520 IF N=0 THEN RESTORE 970
530 IF N=1 THEN RESTORE 990
540 IF N=2 THEN RESTORE 1010
550 READ R$,NN:NN=INT(RND*NN):FOR Z=0 TO NN:READ I$:NEXT Z
560 PEN 3:PRINT" "
570 PRINT"PREGUNTA:";P;TAB(17);"INSTRUMENTO:";I$
580 PRINT " ":PEN 2
590 PRINT " "
600 PRINT "A QUE GRUPO DE INSTRUMENTOS CORRESPONDE":PRINT " ":PRINT"          EL I
NSTRUMENTO CITADO:"
610 PRINT" ":PRINT" "
620 PEN 3:PRINT "             (PULSA 1,2 o 3)"
630 PEN 1:PRINT " "
640 PRINT" ":PRINT "             1. CUERDA"
650 PRINT" ":PRINT "             2. VIENTO"
660 PRINT" ":PRINT "             3. PERCUSION"
670 SOUND 1,100,10
680 REM
690 IF INKEY(64)=0 THEN NR=0:GOTO 730
700 IF INKEY(65)=0 THEN NR=1:GOTO 730
710 IF INKEY(57)=0 THEN NR=2:GOTO 730
720 GOTO 680
730 PEN 2:PRINT " ":PRINT" ":IF NR=N THEN PRINT "!!!CORRECTO!!! LA RESPUESTA ES
";R$:FOR B=1 TO 3:FOR A=15 TO 0 STEP -1:INK 0,A:SOUN
D 1,A,1:NEXT A,B:AC=AC+1
740 IF NR<>N THEN PRINT "INCORRECTO. LA RESPUESTA ERA ";R$:SOUND 1,600,100:FOR A
=1 TO 100:PLOT RND*600,RND*400:NEXT A
750 NEXT P
760 MODE 0:FOR A=1 TO 15:INK A,27-A:NEXT A
770 PEN 5:PRINT "**** RESULTADOS ****"
780 PRINT" ":PRINT" "
790 PEN 2:PRINT "  ACIERTOS.....";AC
800 PRINT " "
810 PEN 3:PRINT "  FALLOS.......";20-AC
820 PRINT" ":PRINT" ":PRINT" "
```

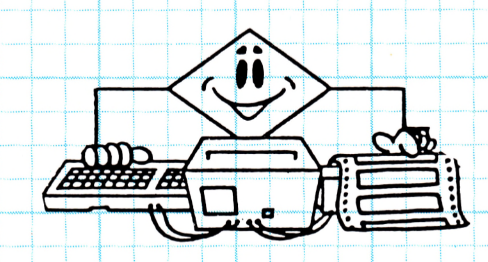
```
830 PEN 1:PRINT"  PORCENTAJE:";AC*5;"%"
840 PRINT" ":PRINT" ":PRINT" "
850 PRINT "**********************"
860 FOR A=0 TO 100:A$=INKEY$:SOUND 1,A,1,15:NEXT A
870 IF INKEY$=""THEN 870
880 GOTO 250
890 MODE 2:RESTORE 970
900 FOR A=1 TO 3
910 READ A$,N
920 PRINT "- INSTRUMENTOS DE ";A$;":":PRINT" "
930 FOR B=1 TO N:READ B$:PRINT "  ";B$,:NEXT B
940 PRINT" ":PRINT" ":PRINT " "
950 NEXT A
960 GOTO 860
970 DATA CUERDA,13
980 DATA VIOLIN,VIOLA,VILONCELO,CONTRABAJO,LAUD,GUITARRA,BANDURRIA,BANJO,ARPA,CI
TARA,CLAVECIN,ESPINETE,UKELELE
990 DATA VIENTO,23
1000 DATA FLAUTA,FLAUTIN,OBOE,DULZAINA,TENORA,CLARINETE,FAGOT,CARAMILLO,TXISTU,G
AITA,TROMPA,TROMPETA,CLARIN,TROMBON,CORNETA,FINGLE,B
UGLE,TUBA,CUERNO,SAXOFON,ORGANO,ARMONICA,ACORDEON
1010 DATA PERCUSION,14
1020 DATA TRIANGULO,PLATILLOS,CAMPANA,GONG,TAMBOR,BOMBO,TIMBAL,PANDERETA,MARACA,
PIANO,XILOFONO,CLAVICORDIO,CELESTE,MARIMBA
1030 DATA 8,4,4,5,4,7,4,7,4,5,4,4,4,2,4,0,4,0,4,2,4,4,8,4,2,2,8,2,8,4,4,5,4,7,4,
7,4,5,4,4,4,2,4,0,4,0,4,2,4,4,8,2,2,0,9,0
1040 DATA -1,-1
```



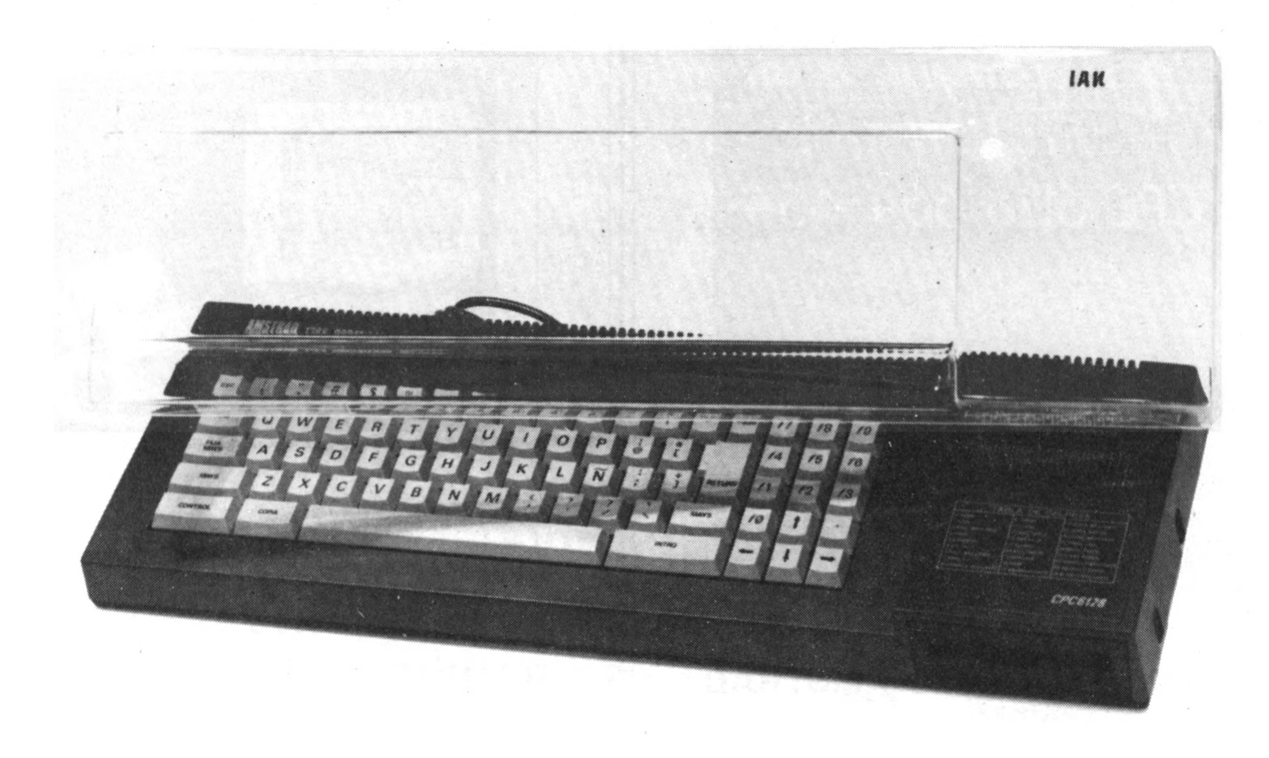
INVASION

```
10 REM ********** INVASION ************
20 REM ****  ANGEL GARCIA DELGADO  ****
30 REM *********** G.T.S. *************
40 REM
50 SYMBOL AFTER 160
60 SYMBOL 160,252,132,246,251,255,254,252,252
70 SYMBOL 161,0,0,0,127,127,0,0,0
80 SYMBOL 162,66,36,126,153,153,126,60,231
90 SYMBOL 163,255,241,253,245,245,253,241,255
100 SYMBOL 164,73,146,73,146,73,146,73,146
110 MODE 0:INK 0,0:INK 1,26:INK 2,23:INK 3,8
120 PAPER 0:BORDER 0:PEN 1
130 CLS
140 ORIGIN 0,0:FOR A=0 TO 600 STEP 5:PLOT A,RND*400,1+INT(RND*15):NEXT A
150 LOCATE 7,12:PRINT "INVASION"
160 FOR A=1 TO 1000 STEP 10:SOUND 1,A,1,15:NEXT A
170 INK 1,26,0
180 FOR A=300 TO 0 STEP -1
```

```
190 SOUND 1,A,1,15:SOUND 2,A+10,1,15:SOUND 3,RND*200,1,15
200 NEXT A:INK 1,26
210 FOR A=15 TO 0 STEP -1:SOUND 1,200,100,A,0,0,31:NEXT A
220 MODE 1:INK 0,0:INK 1,26:INK 2,23:INK 3,8
240 FOR A=0 TO 600 STEP 5:PLOT A,RND*400,1:NEXT A
250 PEN 1
260 LOCATE 13,2:PRINT "<< INVASION >>"
270 PEN 3
280 LOCATE 1,5:PRINT "DESTRUYE A LOS INVASORES ANTES DE QUE SE"
290 LOCATE 1,7:PRINT "APODEREN DE TU BARRERA DE ENERGIA IONICA"
300 PEN 2
310 LOCATE 15,10:PRINT "CONTROLES:"
320 PEN 1
330 LOCATE 13,13:PRINT" TAB. ARRIBA"
340 LOCATE 13,15:PRINT" CAPS. ABAJO"
350 LOCATE 13,17:PRINT"ENTER. DISPARO"
360 LOCATE 5,22:PEN 3:PRINT "PULSA -S- PARA COMENZAR A JUGAR"
370 IF INKEY(60)<>0 THEN 370
380 MODE 1
390 PEN 1
400 DIM M(10)
410 ORIGIN 0,240
420 C=25
430 FOR A=0 TO 640 STEP 5:PLOT A,RND*150,1:NEXT A
440 FOR A=0 TO 640:C=C+9*RND-9*RND:PLOT A,0,2:DRAWR 0,ABS(C):NEXT A
450 FOR A=12 TO 21:LOCATE 2,A:PEN 1:PRINT CHR$(164)
460 PEN 3:LOCATE 39,A:PRINT CHR$(162)
470 M(A-11)=39:NEXT A
480 LOCATE 2,11:PRINT CHR$(163)
490 LOCATE 2,22:PRINT CHR$(163)
500 WINDOW #1,1,40,24,24
510 GOSUB 650
520 X=17
530 B$="":FOR A=1 TO 16:B$=B$+CHR$(161):NEXT A
540 LOCATE 3,X:PRINT " "
550 IF INKEY(68)=0 THEN X=X-1:IF X<12 THEN X=12
560 IF INKEY(70)=0 THEN X=X+1:IF X>21 THEN X=21
570 PEN 1:LOCATE 3,X:PRINT CHR$(160);
580 IF INKEY(18)=0 THEN GOSUB 660
590 PEN 2:N=1+INT(RND*10)
600 PEN 3
610 M(N)=M(N)-2:LOCATE M(N),N+11:PRINT CHR$(162);"  "
620 IF M(N)<2 THEN GOTO 710
630 GOTO 540
640 END
650 PRINT#1,"PUNTOS:";P:RETURN
660 PEN 2:PRINT B$
670 FOR A=1 TO 100 STEP 10:SOUND 1,A,1,15:NEXT A
680 IF M(X-11)<20 THEN M(X-11)=39:SOUND 2,200,10,15,0,0,30:P=P+5:GOSUB 650
690 LOCATE 4,X:PEN 0:PRINT B$
700 RETURN
710 FOR a=1 TO 100:SOUND 2,a,1,15,0,0,30:NEXT a
720 MODE 0
730 PEN 2:INK 2,17,0:LOCATE 6,7:PRINT"GAME OVER"
740 PEN 1:LOCATE 5,13:PRINT"PUNTOS:";P
750 FOR A=1 TO 1000:A$=INKEY$:NEXT A
760 RUN 210
```



IAN KEY-COVER

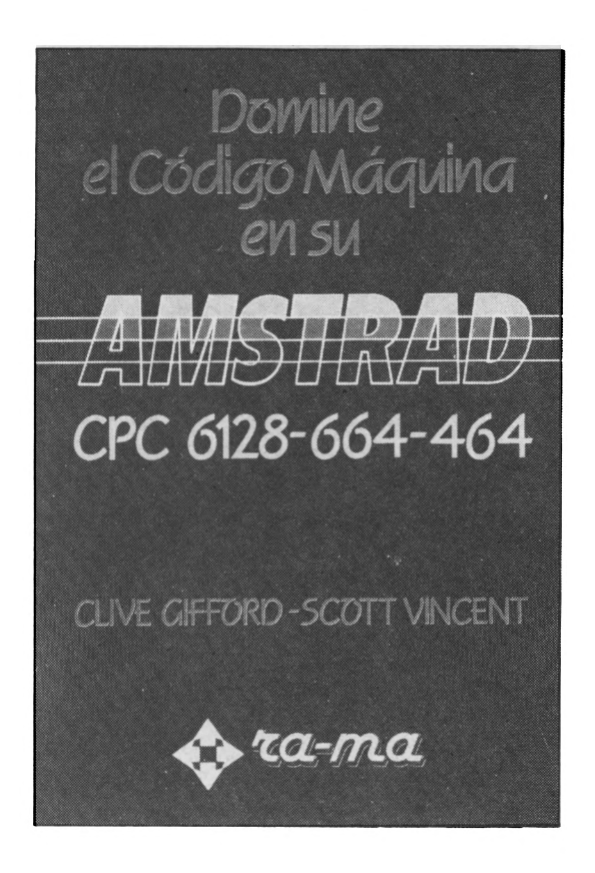




IAN KEY-COVER, ES EL PROTECTOR IDEAL PARA EL TECLADO DE SU AMSTRAD 6128 ESPECIALMENTE DISEÑADO PARA REUNIR TODAS LAS CARACTERISTICAS ADECUADAS PARA ELLO:

- PROTECCION FIRME DEL TECLADO DEL CPC 6128 (REALIZADO CON RESISTENTE METACRILATO DE UNA SOLA PIEZA CON NERVIOS LATERALES PARA FIJACION EN EL REBORDE DEL CONJUNTO DE SU ORDENADOR).
- AJUSTE PERFECTO EN SU ORDENADOR CON SUAVE PRECISION Y COBERTURA TOTAL.
- TRANSPARENTE (CONFIRIENDOLE LA PROPIEDAD DE VISUALIZAR EN TODO MOMENTO SU TECLADO).
- PROTECCION CONTINUA CONTRA ELEMENTOS EXTERNOS (COMO: DERRAMES DE LIQUIDOS, GOLPES, ETC.) ADEMAS DE GOZAR DE LA SEGURIDAD DEL BUEN FUNCIONAMIENTO DE SU ORDENADOR AL REANUDAR SU DIARIO QUEHACER. UN POCO DE CAFE DERRAMADO SOBRE SU TECLADO ELEVARA ENORMEMENTE EL PRESUPUESTO ANUAL DE SU ORDENADOR. EVITE EL RIESGO, PROTEJASE.
- RESGUARDO PERMANENTE CONTRA EL POLVO Y LA POLUCION (EL 50 % DE LAS AVERIAS DE SU TECLADO SON MOTIVADOS POR EL CONTACTO CONSTANTE DE ESTE CON EL POLVO Y LAS PARTICULAS ATMOSFERICAS, EL EXCESO DE HUMEDAD, ETC.). ELIMINE UN RIESGO CONTINUO, DOSIFIQUELO.
- MANTENGALO LIMPIO SU AMSTRAD 6128, CUBRIENDOLO CON IAN KEY-COVER.
- DELE AL TECLADO DE SU AMSTRAD 6128 ESA SENSACION DE PULCRITUD, SENTIDO DEL ORDEN Y APARIENCIA EXTERNA QUE SU AREA DE TRABAJO, ESTUDIO O ENSEÑANZA, REQUIERE.

BIBLIOGRAFIA





EL DOMINIO DEL AMSTRAD PCW 8256/8512

"El dominio del Amstrad PCW 8256/8512" le sitúa en la vía rápida hacia el éxito en los negocios. Lo mismo si está Vd. empezando a utilizar uno de estos ordenadores, como si está considerando comprárselo, este libro le mostrará rápidamente cómo rentabilizar al máximo su inversión.

Una gran parte del libro trata del proceso de texto.

Esta parte del libro es un medio didáctico excelente, que le conducirá desde los usos más sencillos del proceso de textos, a los más avanzados. Una sección aparte cubre el uso de NewWord, la potente alternativa de NewStarSoftware.

DOMINE EL CODIGO MAQUINA EN SU AMSTRAD

Ahora tiene la oportunidad de aprender a programar en código máquina en su ordenador Amstrad. Clive y Scott —dos programadores muy competentes, con gran experiencia en libros y software a sus espaldas— son los guías ideales para ayudarle a comprender las interioridades de la programación en código máquina del Amstrad.

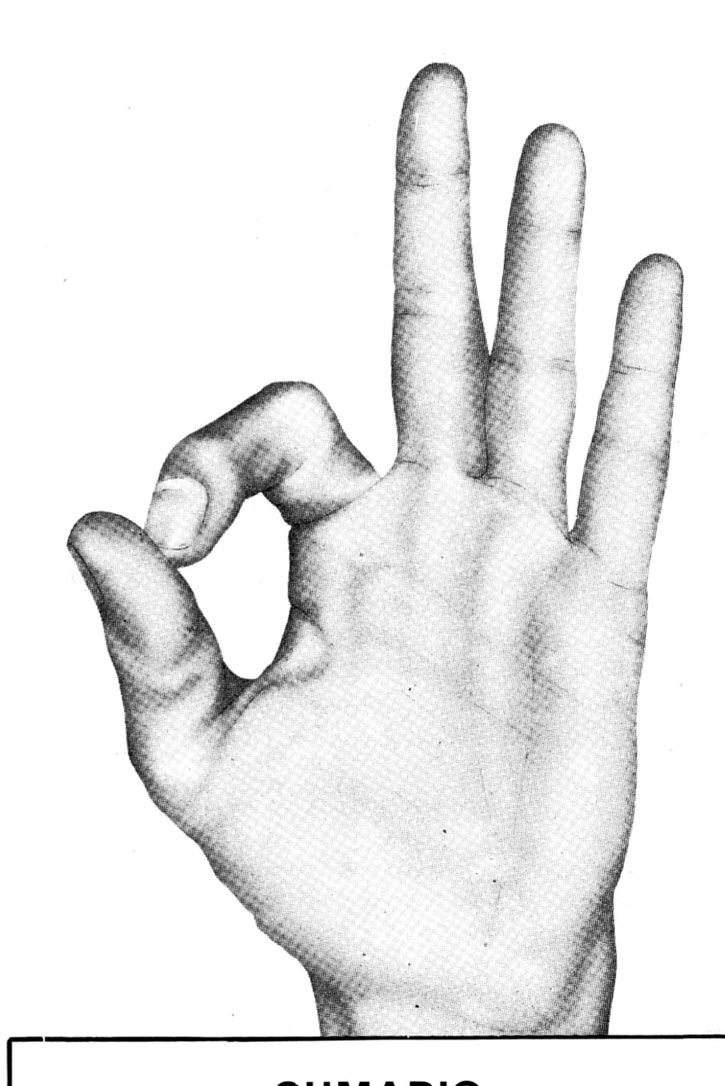
Debe ir trabajando en código máquina del Amstrad.

Debe ir trabajando a lo largo del libro, saltándose las secciones que le presentan una especial dificultad la primera vez que las lea. Cuando haya terminado su primera lectura, tendrá los suficientes conocimientos como para poder comprender aquellas secciones que dejó sin completar la primera vez que pasó por ellas.

AMIGOS DEL
AMSTRAD

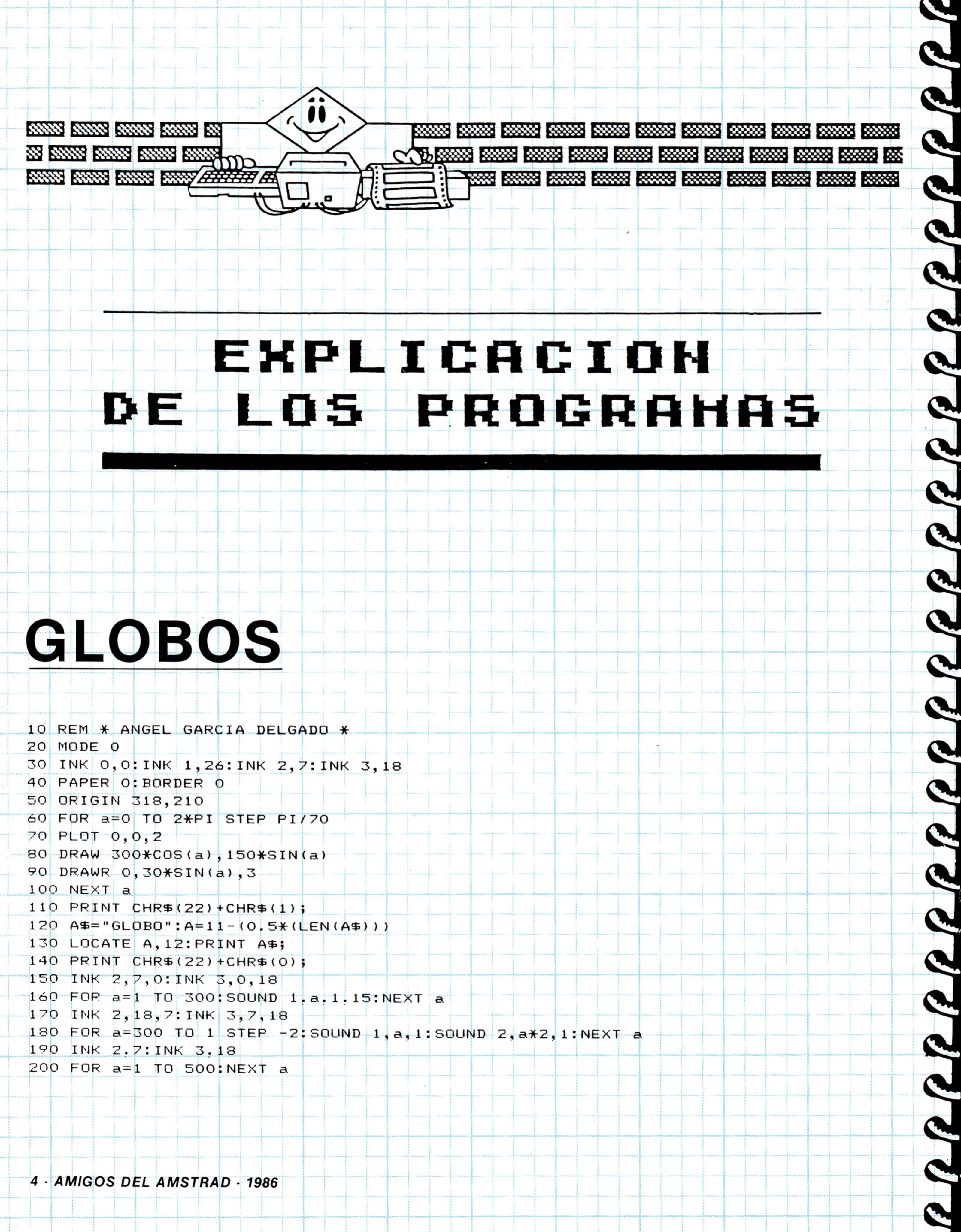
EDITORIAL

Si bien, la elección de un ordenador es importante, más importante es todavía el saber estructurar las instrucciones para lograr una mayor eficacia.
La utilización de un método estructurado facilita el desarrollo de los programas y sus posibles modificaciones si fueran precisas. De esta forma, veremos que programar no consiste en escribir el mayor número posible de líneas, sino que es mucho más interesante la calidad que la cantidad.
Por esto, una sugerencia que os hacemos, es que intentéis variar los programas que os listamos e intentéis mejorarlos.
Suerte.



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SUMARIO



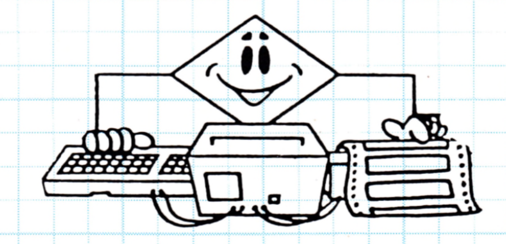
EXPLICACION DE LOS PROGRAMAS

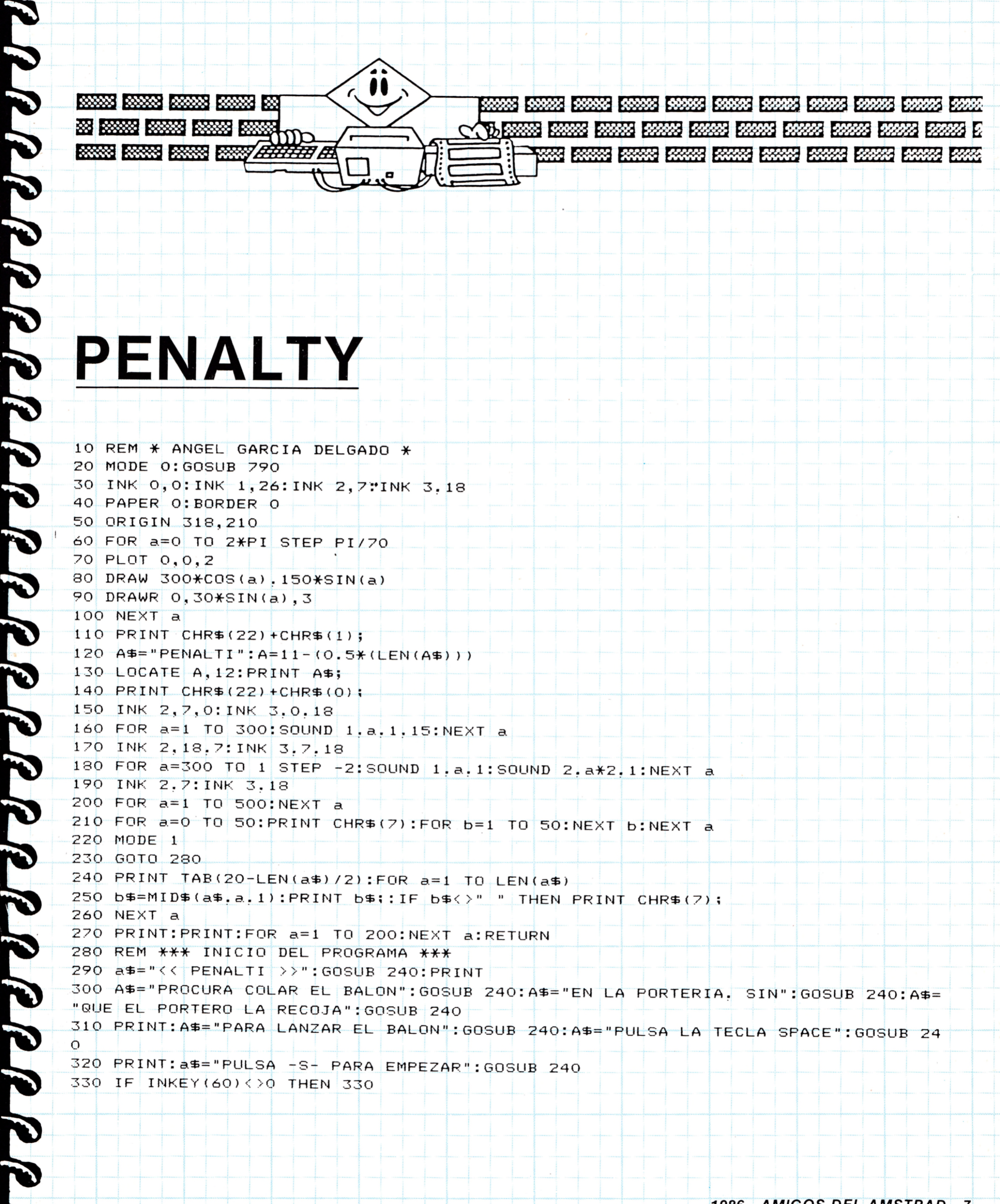
GLOBOS

```
10 REM * ANGEL GARCIA DELGADO *
20 MODE 0
30 INK 0,0:INK 1,26:INK 2,7:INK 3,18
40 PAPER 0:BORDER 0
50 ORIGIN 318,210
60 FOR a=0 TO 2*PI STEP PI/70
70 PLOT 0,0,2
80 DRAW 300*COS(a),150*SIN(a)
90 DRAWR 0,30*SIN(a),3
100 NEXT a
110 PRINT CHR$(22)+CHR$(1);
120 A$="GLOBO":A=11-(0.5*(LEN(A$)))
130 LOCATE A,12:PRINT A$;
140 PRINT CHR$(22)+CHR$(0);
150 INK 2,7,0:INK 3,0,18
160 FOR a=1 TO 300:SOUND 1.a.1.15:NEXT a
170 INK 2,18,7:INK 3,7,18
180 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
190 INK 2.7:INK 3.18
200 FOR a=1 TO 500:NEXT a
```

```
210 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
220 MODE 1
230 GOTO 280
240 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
250 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
260 NEXT a
270 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
280 REM *** INICIO DEL PROGRAMA ***
290 a$="<< GLOBO >>":GOSUB 240:PRINT
300 A$="RECOGE CON TU GLOBO A LOS HOMBRES":GOSUB 240:A$="PERO SIN PINCHARLO CON"
:GOSUB 240:A$="LOS ALFILERES O LAS TIJERAS.":GOSUB 2
40
310 PRINT:A$="CONTROLES:":GOSUB 240
320 A$="Q. ARRIBA":GOSUB 240:A$="A. ABAJO":GOSUB 240:A$="O. IZQUIERDA":GOSUB 240
:A$="P. DERECHA":GOSUB 240
330 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 240
340 IF INKEY(60)<>0 THEN 340
350 GOSUB 660
360 INK 0,23:PAPER 0:BORDER 23:PEN 1:INK 1,0
370 MODE 0:INK 2,10:INK 4,26:INK 3,6
380 WINDOW #1,1,20,1,3:PAPER #1,4:CLS #1
390 WINDOW 1,20,4,25
400 P=0:FA=0:GOSUB 630
410 PEN 2:FOR A=1 TO 20:X=1+INT(RND*18):Y=1+INT(RND*19)
420 LOCATE Y,X:IF RND>0.5 THEN PRINT"g"; ELSE PRINT"h";
430 SOUND 1,A,2
440 NEXT
450 PEN 3:FOR A=1 TO 15:X=1+INT(RND*18):Y=1+INT(RND*19)
460 SOUND 2,50-A,2
470 LOCATE Y,X:PRINT"e";:NEXT
480 X=10:Y=9:XB=X:YB=Y
490 IF NOT INKEY(67) THEN X=X-1:IF X<1 THEN X=1
500 IF NOT INKEY(69) THEN X=X+1:IF X>18 THEN X=18
510 IF NOT INKEY(34) THEN Y=Y-1:IF Y<1 THEN Y=1
520 IF NOT INKEY(27) THEN Y=Y+1:IF Y>18 THEN Y=18
530 LOCATE Y,X:GOSUB 590:LOCATE Y+1,X:GOSUB 590
540 LOCATE Y,X+1:GOSUB 590:LOCATE Y+1,X+1:GOSUB 590
550 PEN 1:LOCATE YB,XB:PRINT"  ":LOCATE YB,XB+1:PRINT"  "
560 PEN 1:LOCATE Y,X:PRINT"ab":LOCATE Y,X+1:PRINT"cd"
570 XB=X:YB=Y
580 GOTO 490
590 CALL 30000:C=PEEK(29999)
600 IF C=101 THEN FOR A=100 TO 200 STEP 4:SOUND 1,A,1:NEXT:P=P+15:GOSUB 630
610 IF C=103 OR C=104 THEN SOUND 2,50,15,15,0,0,31:FA=FA+1:GOSUB 630
620 RETURN
630 LOCATE #1,2,2:PRINT#1,"PTOS:";P:LOCATE #1,14,2:PRINT#1,"FA:";FA
640 IF FA>4 THEN 790
650 RETURN
660 DATA 205,96,187,50,47,117,201
670 RESTORE 660
680 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
690 SYMBOL AFTER 97
700 SYMBOL 97,7,25,50,102,78,142,156,156
710 SYMBOL 98,224,152,76,102,114,113,57,57
720 SYMBOL 99,221,101,63,19,8,15,7,7
```

```
730 SYMBOL 100,187,166,252,200,16,240,224,224
740 SYMBOL 101,56,56,16,254,16,40,68,130
750 SYMBOL 102,18,0,68,16,129,40,2,72
760 SYMBOL 103,6,6,8,16,32,64,0,0
770 SYMBOL 104,231,165,231,104,16,40,68,130
780 RETURN
790 REM *** GAME OVER ***
800 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
810 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
820 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
830 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "₧₧₧₧₧₧";P
840 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
850 FOR A=1 TO 50:A$=INKEY$:NEXT A
860 PEN 1
870 IF INKEY(60)=0 THEN RUN 220
880 IF INKEY(46)=0 THEN CALL 0
890 GOTO 870
```



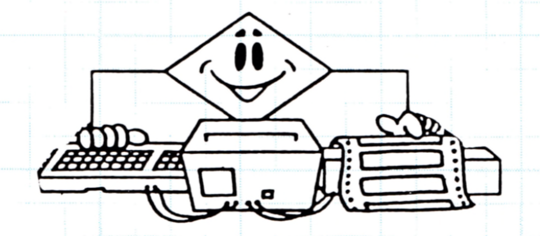


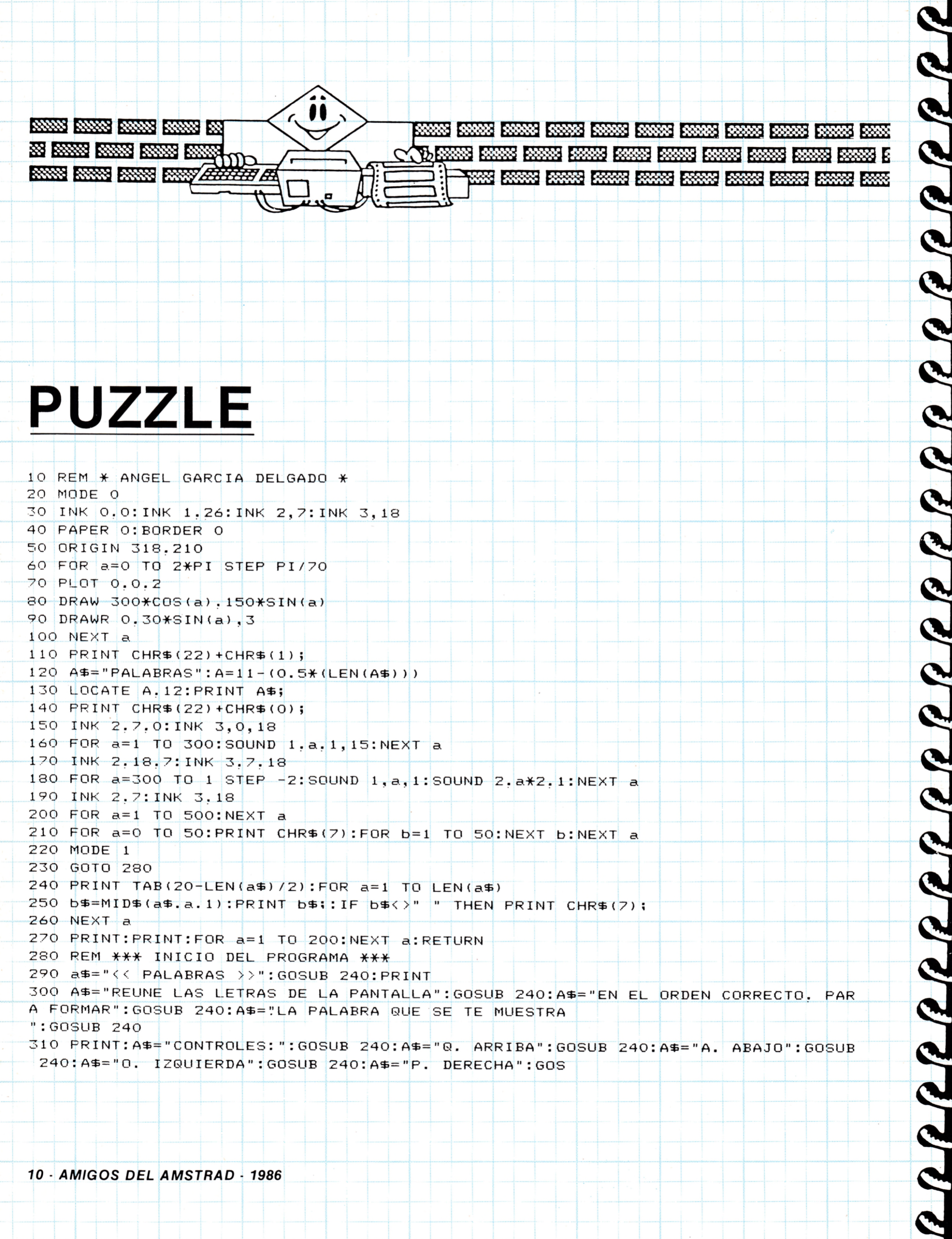
PENALTY

```
10 REM * ANGEL GARCIA DELGADO *
20 MODE 0:GOSUB 790
30 INK 0,0:INK 1,26:INK 2,7:INK 3,18
40 PAPER 0:BORDER 0
50 ORIGIN 318,210
60 FOR a=0 TO 2*PI STEP PI/70
70 PLOT 0,0,2
80 DRAW 300*COS(a),150*SIN(a)
90 DRAWR 0,30*SIN(a),3
100 NEXT a
110 PRINT CHR$(22)+CHR$(1);
120 A$="PENALTI":A=11-(0.5*(LEN(A$)))
130 LOCATE A,12:PRINT A$;
140 PRINT CHR$(22)+CHR$(0);
150 INK 2,7,0:INK 3,0,18
160 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
170 INK 2,18,7:INK 3,7,18
180 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
190 INK 2,7:INK 3,18
200 FOR a=1 TO 500:NEXT a
210 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
220 MODE 1
230 GOTO 280
240 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
250 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
260 NEXT a
270 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
280 REM *** INICIO DEL PROGRAMA ***
290 a$="<< PENALTI >>":GOSUB 240:PRINT
300 A$="PROCURA COLAR EL BALON":GOSUB 240:A$="EN LA PORTERIA, SIN":GOSUB 240:A$=
"QUE EL PORTERO LA RECOJA":GOSUB 240
310 PRINT:A$="PARA LANZAR EL BALON":GOSUB 240:A$="PULSA LA TECLA SPACE":GOSUB 24
0
320 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 240
330 IF INKEY(60)<>0 THEN 330
```

```
340 P=0:FA=0:INK 0,18:INK 1,0:INK 2,26:INK 3,8
350 PAPER 0:BORDER 18
360 MODE 1:GOSUB 730
370 WINDOW #1,1,40,24,24:GOSUB 700
380 WINDOW #2,1,40,21,21
390 A$="PULSA SPACE PARA DISPARAR":GOSUB 680
400 x=17:y=20
410 yP=16+INT(RND*9):D=1:DP=-1
420 LOCATE YP,5:PRINT"a":LOCATE YP,6:PRINT"b"
430 LOCATE Y,X:PRINT" ":
440 Y=Y+D:IF Y>35 THEN D=-1
450 IF Y<5 THEN D=1
460 LOCATE Y,X:PRINT"c":CALL &BD19
470 IF NOT INKEY(47) THEN 490
480 GOTO 430
490 FOR A=100 TO 200 STEP 6:SOUND 1,A,1:NEXT
500 LOCATE YP,5:PRINT" ":LOCATE YP,6:PRINT" "
510 YP=YP+DP:IF YP>24 THEN DP=-1
520 IF YP<16 THEN DP=1
530 LOCATE YP,5:PRINT"a":LOCATE YP,6:PRINT"b"
540 LOCATE Y,X:PRINT" ":X=X-1:IF X<4 THEN 580
550 LOCATE Y,X:PRINT CHR$(102-X/7);
560 IF X=5 OR X=6 THEN IF Y=YP THEN 630
570 GOTO 500
580 GOSUB 730:IF Y<15 OR Y>26 THEN 650
590 ENT 1,20,-3,1:SOUND 1,100,15,15,0,1
600 P=P+15:GOSUB 700
610 A$="GOOOOL............":FOR N=1 TO 4:GOSUB 680:NEXT
620 GOTO 360
630 GOSUB 730:SOUND 2,100,5,15,0,0,31:A$="PARADA DEL PORTERO":GOSUB 680
640 GOTO 660
650 SOUND 4,300:A$="LA PELOTA HA SALIDO FUERA":GOSUB 680
660 FOR A=1 TO 100:NEXT:FA=FA+1:GOSUB 700
670 FOR A=1 TO 600:NEXT:GOTO 360
680 CLS #2:PRINT#2,TAB(20-LEN (A$)/2);
690 FOR A=1 TO LEN (A$):PRINT #2,MID$(A$,A,1);CHR$(7);:NEXT:RETURN
700 LOCATE #1,5,1:PRINT#1,"PUNTOS:";P:LOCATE #1,26,1:PRINT#1,"FALLOS:";FA
710 IF FA>4 THEN 860
720 RETURN
730 PLOT 0,250,2:DRAW 100,300:DRAW 530,300:DRAW 630,250
740 PLOT 150,300:DRAW 0,100:DRAW 630,100:DRAW 480,300
750 PLOT 180,300:DRAW 80,150:DRAW 550,150:DRAW 450,300
760 PLOT 214,302,3:DRAW 214,380:DRAW 630-214,380:DRAW 630-214,302
770 PLOT 210,302:DRAW 210,384:DRAW 630-210,384:DRAW 630-210,302
780 RETURN
790 SYMBOL AFTER 97
800 SYMBOL 97,60,126,90,126,60,24,126,255
810 SYMBOL 98,189,189,189,60,36,36,102,231
820 SYMBOL 99,60,126,255,255,255,255,126,60
830 SYMBOL 100,0,60,126,126,126,126,60,0
840 SYMBOL 101,0,0,24,60,60,24,0,0
850 RETURN
860 REM *** GAME OVER ***
870 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
880 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
```

```
890 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
900 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "₧₧₧₧₧₧";P
910 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
920 FOR A=1 TO 50:A$=INKEY$:NEXT A
930 PEN 1
940 IF INKEY(60)=0 THEN RUN 220
950 IF INKEY(46)=0 THEN CALL 0
960 GOTO 940
```

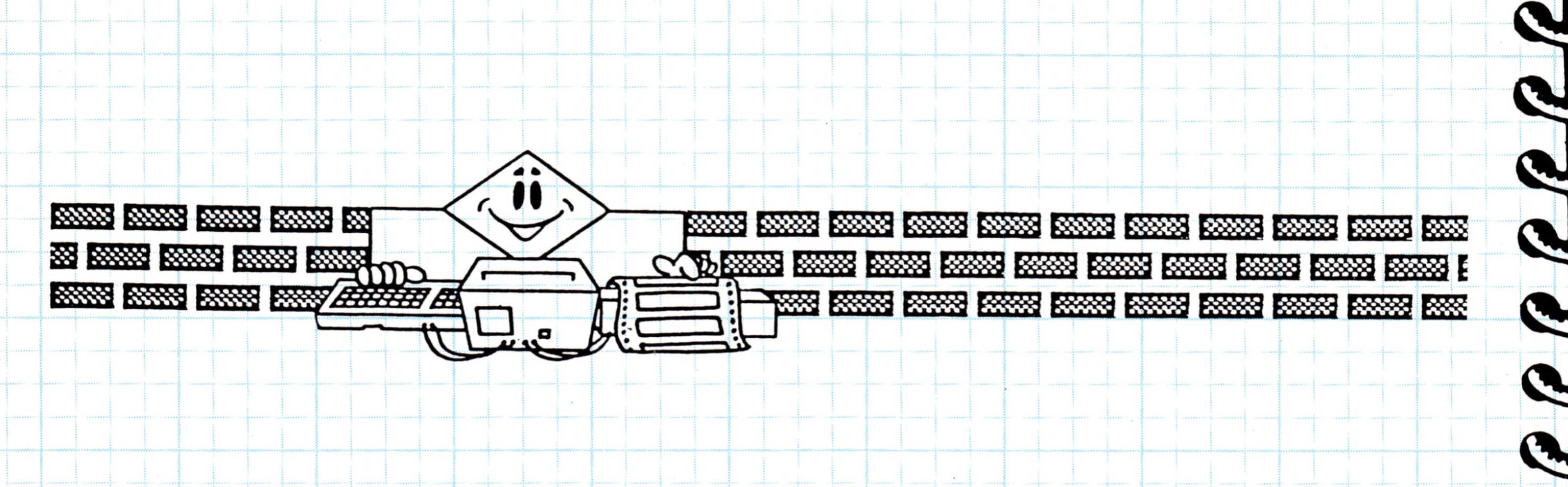




PUZZLE

```
10 REM * ANGEL GARCIA DELGADO *
20 MODE 0
30 INK 0.0:INK 1.26:INK 2,7:INK 3,18
40 PAPER 0:BORDER 0
50 ORIGIN 318.210
60 FOR a=0 TO 2*PI STEP PI/70
70 PLOT 0.0.2
80 DRAW 300*COS(a).150*SIN(a)
90 DRAWR 0.30*SIN(a),3
100 NEXT a
110 PRINT CHR$(22)+CHR$(1);
120 A$="PALABRAS":A=11-(0.5*(LEN(A$)))
130 LOCATE A.12:PRINT A$;
140 PRINT CHR$(22)+CHR$(0);
150 INK 2.7.0:INK 3,0,18
160 FOR a=1 TO 300:SOUND 1.a.1,15:NEXT a
170 INK 2.18.7:INK 3.7.18
180 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2.a*2.1:NEXT a
190 INK 2.7:INK 3.18
200 FOR a=1 TO 500:NEXT a
210 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
220 MODE 1
230 GOTO 280
240 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
250 b$=MID$(a$.a.1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
260 NEXT a
270 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
280 REM *** INICIO DEL PROGRAMA ***
290 a$="<< PALABRAS >>":GOSUB 240:PRINT
300 A$="REUNE LAS LETRAS DE LA PANTALLA":GOSUB 240:A$="EN EL ORDEN CORRECTO. PAR
A FORMAR":GOSUB 240:A$="LA PALABRA QUE SE TE MUESTRA
":GOSUB 240
310 PRINT:A$="CONTROLES:":GOSUB 240:A$="Q. ARRIBA":GOSUB 240:A$="A. ABAJO":GOSUB
 240:A$="O. IZQUIERDA":GOSUB 240:A$="P. DERECHA":GOS
```

```
UB 240
320 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 240
330 IF INKEY(60)<>0 THEN 330
340 GOSUB 600
350 INK 0.0:PAPER 0:BORDER 0:MODE 1
360 INK 1.26:INK 2.8
370 RESTORE 590:FOR A=1 TO 1+INT(RND*14):READ T$:NEXT
380 PEN 2:LOCATE 1.8:A$="LA PALABRA ES:":PEN 1:GOSUB 240:A$=T$:GOSUB 240
390 FOR A=1 TO 2000:NEXT
400 PEN 2:FOR A=1 TO 25:PRINT STRING$(40."a");:NEXT
410 WINDOW ₧1.2.39.2.4:WINDOW ₧2.3.38.3.3:WINDOW 2.39.6.24:CLS ₧1:CLS:CLS ₧2
420 PEN 1:FOR A=1 TO LEN (T$)
430 Y=1+INT(RND*38):X=1+INT(RND*18):IF X=10 AND Y=19 THEN 430
440 LOCATE Y.X:CALL 30000:IF PEEK(29999)=32 THEN PRINT MID$(T$.A.1); ELSE 430
450 NEXT
460 X=10:Y=10:XB=X:YB=Y
470 IF NOT INKEY(67) THEN X=X-1:IF X<1 THEN X=1
480 IF NOT INKEY(69) THEN X=X+1:IF X>19 THEN X=19
490 IF NOT INKEY(34) THEN Y=Y-1:IF Y<1 THEN Y=1
500 IF NOT INKEY(27) THEN Y=Y+1:IF Y>38 THEN  Y=38
510 LOCATE Y.X:CALL 30000:C=PEEK(29999)
520 IF C>64 AND C<91 THEN R$=R$+CHR$(C):P=P+5:PRINT₧2.R$:FOR A=100 TO 200 STEP 4
:SOUND 1.A.1:NEXT:IF LEN(R$)=LEN(T$) THEN 560
530 IF C=99 THEN IF X<>XB OR Y<>YB THEN GOTO 710
540 LOCATE YB.XB:PRINT "c";:LOCATE Y.X:PRINT"b";:yb=y:XB=X
550 GOTO 470
560 CLS:LOCATE 1.5:IF T$=R$ THEN PRINT " CORRECTO !!!":PRINT:PRINT" BONO DE 5000
 PUNTOS":FOR A=1 TO 400:SOUND 1.A.1.15:NEXT:P=P+5000
570 IF T$<>R$ THEN PRINT" INCORRECTO....":PRINT:PRINT" LA PALABRA ES: ";T$
580 GOTO 710
590 DATA AMSTRAD.ESTERNOCLEIDOMASTOIDEO.CORAZON.UNIDAD.PORTAVIONES.PENICILINA.CU
CHARADA.CARACOL.SALAMANDRA.HIBRIDACION.ORBITAL.CELUL
A.IMPRESORA.MICROORDENADOR
600 DATA 205.96.187.50.47.117.201
610 RESTORE 600
620 FOR a=30000 TO 30006:READ b:POKE a.b:NEXT a
630 SYMBOL AFTER 97
640 SYMBOL 97.0.239.239.239.0.254.254.254
650 SYMBOL 98.60.126.153.189.255.195.102.60
660 SYMBOL 99.0.0.36.0.0.36.0.0
670 RETURN
680 SYMBOL 97.0.239.239.239.0.254.254.254
690 SYMBOL 98.60.126.153.189.255.195.102.60
700 SYMBOL 99.0.0.36.0.0.36.0.0
710 REM *** GAME OVER ***
720 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1.B.1.15.0.0.31:NEXT B:NEXT A
730 INK 0.0:INK 1.26:INK 2.15.0:PAPER 0:BORDER 0:PEN 1:MODE 0
740 PEN 2:LOCATE 6.7:PRINT"GAME OVER"
750 PEN 1:LOCATE 4.12:PRINT"PUNTOS:";USING "₧₧₧₧₧";P
760 PEN 3:INK 3.15:LOCATE 5.17:PRINT "OTRA? (S/N)"
770 FOR A=1 TO 50:A$=INKEY$:NEXT A
780 PEN 1
790 IF INKEY(60)=0 THEN RUN 220
800 IF INKEY(46)=0 THEN CALL 0
810 GOTO 790
```

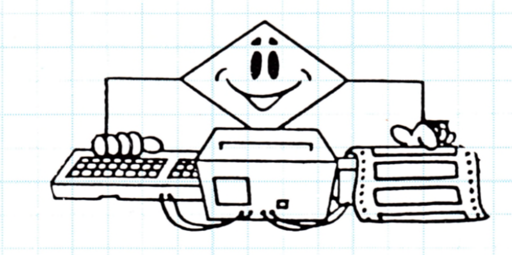


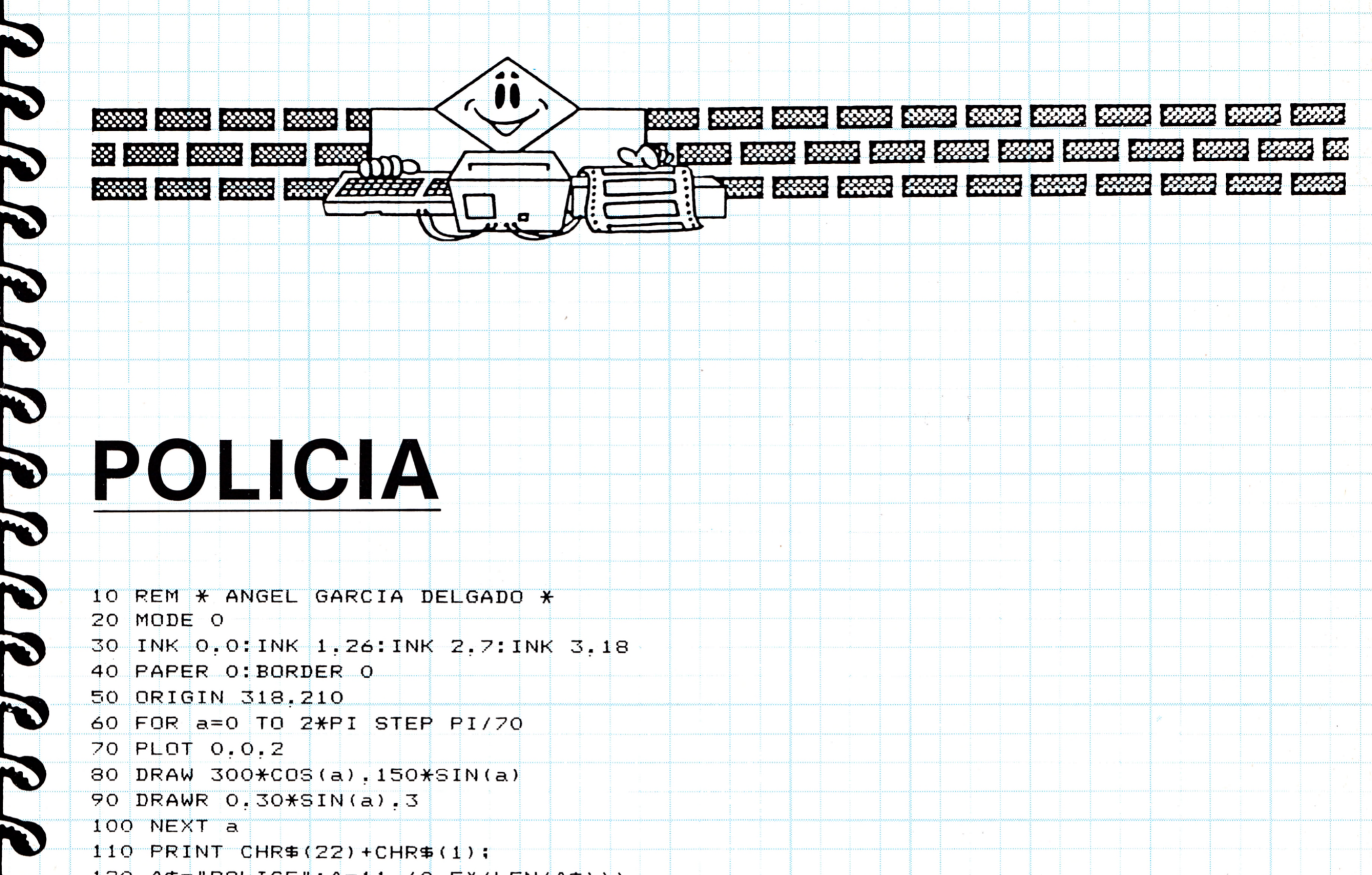
PIRAMIDE

```
10 REM * ANGEL GARCIA DELGADO *
20 MODE 0
30 INK 0,0:INK 1,26:INK 2,7:INK 3,18
40 PAPER 0:BORDER 0
50 ORIGIN 318,210
60 FOR a=0 TO 2*PI STEP PI/70
70 PLOT 0,0,2
80 DRAW 300*COS(a),150*SIN(a)
90 DRAWR 0,30*SIN(a),3
100 NEXT a
110 PRINT CHR$(22)+CHR$(1);
120 A$="PIRAMIDE":A=11-(0.5*(LEN(A$)))
130 LOCATE A,12:PRINT A$;
140 PRINT CHR$(22)+CHR$(0);
150 INK 2,7,0:INK 3,0,18
160 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
170 INK 2,18,7:INK 3,7,18
180 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
190 INK 2,7:INK 3,18
200 FOR a=1 TO 500:NEXT a
210 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
220 MODE 1
230 GOTO 280
240 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
250 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
260 NEXT a
270 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
280 REM *** INICIO DEL PROGRAMA ***
290 a$="<< PIRAMIDE >>":GOSUB 240:PRINT
300 A$="ALCANZA LA CIMA DE LA PIRAMIDE":GOSUB 240:A$="RECOGIENDO LOS TESOROS. PE
RO SIN":GOSUB 240:A$="CHOCAR CONTRA EL FANTASMA":GOS
UB 240
310 PRINT:A$="CONTROLES:":GOSUB 240:A$="Q. ARRIBA":GOSUB 240:A$="A. ABAJO":GOSUB
 240:A$="O. IZQUIERDA":GOSUB 240:A$="P. DERECHA":GOS
```

```
UB 240
320 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 240
330 IF INKEY(60)<>0 THEN 330
340 GOSUB 970
350 PAPER 0:BORDER 0:INK 0,0:MODE 1
360 INK 1,26:INK 2,15:INK 3,18
370 WINDOW #1,2,39,1,1:WINDOW 1,40,4,25
380 P=0:V=3:GOSUB 730
390 PEN 2:GOSUB 760
400 x=19:y=20:XB=X:YB=Y
410 XM=7:YM=20:BX=XM:BY=YM
420 IF NOT INKEY(67) THEN X=X-1
430 IF NOT INKEY(69) THEN X=X+1
440 IF NOT INKEY(34) THEN Y=Y-1
450 IF NOT INKEY(27) THEN Y=Y+1
460 LOCATE Y,X:CALL 30000:C=PEEK(29999)
470 IF C=97 THEN X=XB:Y=YB
480 IF C=98 THEN 1070
490 IF C=101 OR C=100 THEN P=P+75:GOSUB 730
500 PEN 1:LOCATE YB,XB:PRINT" ";:LOCATE Y,X:PRINT CHR$(248+RND*3);
510 xb=x:yb=y
520 IF xm<x THEN xm=xm+1
530 IF xm>x THEN xm=xm-1
540 LOCATE ym,xm:CALL 30000:C=PEEK(29999)
550 IF C<>32 THEN XM=BX
560 IF ym<y THEN ym=ym+0.5
570 IF ym>y THEN ym=ym-0.5
580 LOCATE YM,XM:CALL 30000:C=PEEK(29999)
590 IF C>247 THEN 1070
600 IF C=98 THEN BY=YM
610 IF C<>32 THEN YM=BY
620 PEN 3:LOCATE BY,BX:PRINT" ";:LOCATE YM,XM:PRINT"b";
630 BX=XM:BY=YM
640 IF x=5 THEN 660
650 GOTO 420
660 ENT 1,10,-2,1:FOR A=1 TO 100:SOUND 1,A,10,15,0,1:NEXT
670 MODE 1:LOCATE 1,5:A$="LO CONSEGUISTE !!!":GOSUB 240
680 A$="ALCANZASTE LA CIMA DE LA PIRAMIDE":GOSUB 240
690 PRINT:A$="BONO DE 5000 PUNTOS":GOSUB 240
700 P=P+5000:SOUND 2,50,5,15,0,0,31:GOSUB 730
710 GOTO 1070
720 GOTO 720
730 LOCATE #1,14,1:PRINT#1,"PUNTOS:";P
740 IF V<1 THEN 1070
750 RETURN
760 PRINT"                   aa                    ";
770 PRINT"    a             aaaa                   ";
780 PRINT"   aaa           aa  aa                  ";
790 PRINT"  a aaa         aa    aa            a    ";
800 PRINT" a  aaaa       aa      aa          aaa   ";
810 PRINT"a    aaaa     aaaaaa  aaaa        a aaa  ";
820 PRINT"     aaaaa   aa         eaa      a   aaa ";
830 PRINT"     aaaaaa aaaa  aaaaaaaaaa    a     aaa";
840 PRINT"      aaaa aa d             aa a      aaa";
850 PRINT"      aaa aaaaaaaaaaaaa   aaaaa a      aa";
```

```
860 PRINT"aaaaaaaa aa                d aa a      a";
870 PRINT"        aaaa  aaaaaaaaaaaaaaaaaa aaaaaaa";
880 PRINT" a  a  aa e                     aa      ";
890 PRINT"      aaaaaaaaaaaa  aaaaaaaaaaaaaa  a   ";
900 PRINT"a a   aa                        eaa    a";
910 PRINT"    aaaaa  aaaaaaaaaaaaaaaaaa  aaaaa a  ";
920 PRINT"   aa d                            aa  a";
930 PRINT"  aaaaaaaaaaaaaaaaaaaaaa  aaaaaaaaaaaa  ";
940 PRINT" aa e                              d aa ";
950 PRINT"aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa";
960 RETURN
970 DATA 205,96,187,50,47,117,201
980 RESTORE 970
990 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
1000 SYMBOL AFTER 97
1010 SYMBOL 97,124,190,254,190,214,174,84,0
1020 SYMBOL 98,124,146,218,254,254,170,170,0
1030 SYMBOL 99,8,161,4,160,9,64,17,68
1040 SYMBOL 100,8,20,20,73,127,73,8,28
1050 SYMBOL 101,0,0,62,46,46,20,8,62
1060 RETURN
1070 REM *** GAME OVER ***
1080 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
1090 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
1100 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
1110 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "₧₧₧₧₧₧";P
1120 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
1130 FOR A=1 TO 50:A$=INKEY$:NEXT A
1140 PEN 1
1150 IF INKEY(60)=0 THEN RUN 220
1160 IF INKEY(46)=0 THEN CALL 0
1170 GOTO 1150
```



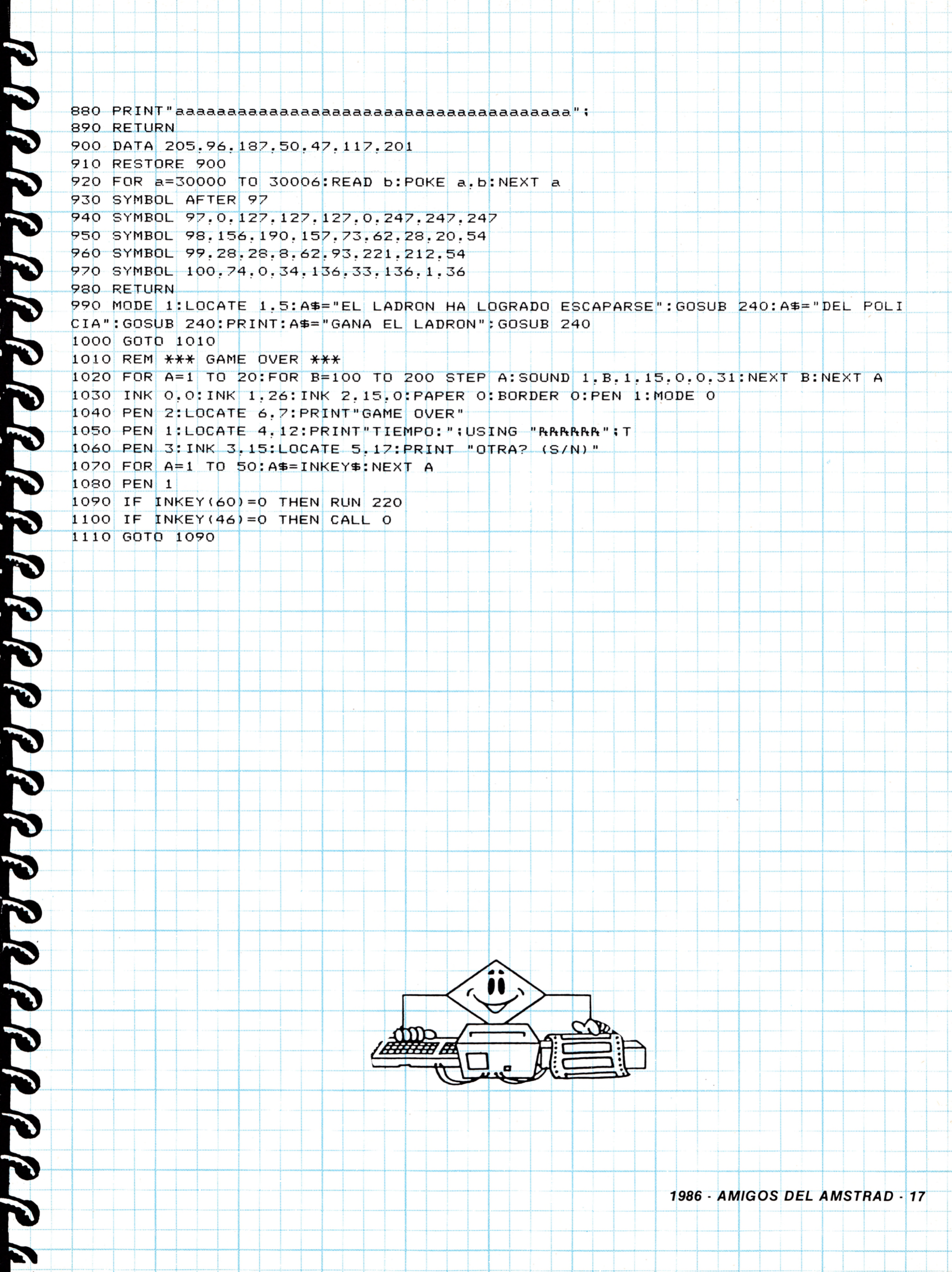


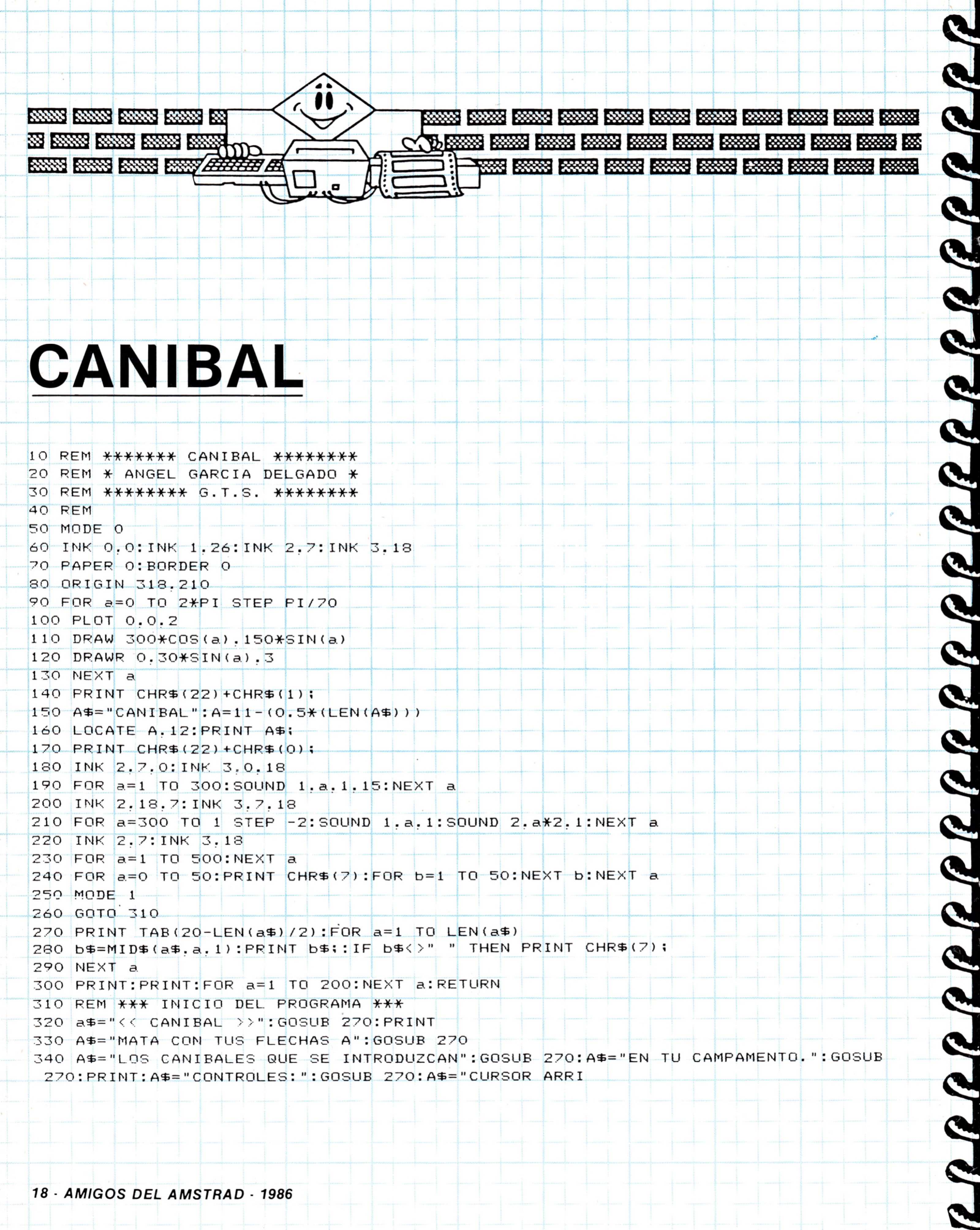
POLICIA

```
10 REM * ANGEL GARCIA DELGADO *
20 MODE 0
30 INK 0,0:INK 1,26:INK 2,7:INK 3,18
40 PAPER 0:BORDER 0
50 ORIGIN 318,210
60 FOR a=0 TO 2*PI STEP PI/70
70 PLOT 0,0,2
80 DRAW 300*COS(a),150*SIN(a)
90 DRAWR 0,30*SIN(a),3
100 NEXT a
110 PRINT CHR$(22)+CHR$(1);
120 A$="POLICE":A=11-(0.5*(LEN(A$)))
130 LOCATE A,12:PRINT A$;
140 PRINT CHR$(22)+CHR$(0);
150 INK 2,7,0:INK 3,0,18
160 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
170 INK 2,18,7:INK 3,7,18
180 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
190 INK 2,7:INK 3,18
200 FOR a=1 TO 500:NEXT a
210 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
220 MODE 1
230 GOTO 280
240 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
250 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
260 NEXT a
270 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
280 REM *** INICIO DEL PROGRAMA ***
290 a$="<< POLICIA >>":GOSUB 240:PRINT
300 A$="EL POLICIA DEBE CAPTURAR AL LADRON":GOSUB 240:A$="ANTES DE AGOTARSE EL T
IEMPO":GOSUB 240
310 PRINT:A$="CONTROLES:":GOSUB 240:A$="JUG. IZQUIERDO      JUG. DERECHO":GOSUB 2
40:A$="LADRON          POLICIA":GOSUB 240:A$="Q.A.X.C.
          CURSORES":GOSUB 240
320 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 240
```

```
330 IF INKEY(60)<>0 THEN 330
340 GOSUB 900
350 PAPER 0:INK 0,22:BORDER 22:MODE 1
360 WINDOW ₧1.2.39.2.2:WINDOW 2.39.5.24
370 INK 1,0:INK 2,6:INK 3.8
380 PEN 2:GOSUB 690
390 T=250:GOSUB 670
400 XP=2:YP=2:XL=19:YL=19
410 PX=XP:PY=YP:LY=YL:LX=XL
420 IF NOT INKEY(0) THEN XP=XP-1
430 IF NOT INKEY(2) THEN XP=XP+1
440 IF NOT INKEY(1) THEN YP=YP+1
450 IF NOT INKEY(8) THEN YP=YP-1
460 LOCATE YP.XP:CALL 30000:C=PEEK(29999)
470 IF C=97 THEN XP=PX:YP=PY
480 IF C=99 THEN GOTO 620
490 PEN 1:LOCATE PY.PX:PRINT" ";:LOCATE YP.XP:PRINT"b";
500 PX=XP:PY=YP
510 IF NOT INKEY(67) THEN XL=XL-1
520 IF NOT INKEY(69) THEN XL=XL+1
530 IF NOT INKEY(62) THEN YL=YL+1
540 IF NOT INKEY(63) THEN YL=YL-1
550 LOCATE YL.XL:CALL 30000:C=PEEK(29999)
560 IF C=97 THEN XL=LX:YL=LY
570 IF C=98 THEN GOTO 620
580 PEN 3:LOCATE LY.LX:PRINT" ";:LOCATE YL.XL:PRINT"c";
590 LX=XL:LY=YL
600 T=T-1:GOSUB 670
610 GOTO 420
620 FOR A=100 TO 200:SOUND 1.A.2:NEXT
630 MODE 1
640 A$="EL POLICIA HA CAPTURADO":GOSUB 240:A$="AL LADRON":GOSUB 240
650 PRINT:A$="GANA EL POLICIA":GOSUB 240:GOTO 1010
660 GOTO 660
670 LOCATE ₧1.14.1:PRINT₧1."TIEMPO: ";USING "₧₧₧";T:IF T<1 THEN 990
680 RETURN
690 PRINT"aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa";
700 PRINT"a   a                                a";
710 PRINT"a aaaaaaaaaaaaaaaaaaaaaaa aaaaaaaaaa a";
720 PRINT"a a                     a a    a   a a";
730 PRINT"a a aaaaaaaa aaaaaaaaaaaa aaaa a a a a";
740 PRINT"a a a            a  a  a   a a a a a a";
750 PRINT"a a a a a  a aaa                 a a a";
760 PRINT"a a aaaaaaaa aaa a a aa aaa aaaa a a a";
770 PRINT"a                                a a a";
780 PRINT"a a a aaaaaaaaaa aaaaaaaaaaaaa aaa a a";
790 PRINT"a a a a        a             a a   a a";
800 PRINT"a a a a aaaaaaaa aaaaa aaaaa a a a a a";
810 PRINT"a a a a          a   a a   a a a a a a";
820 PRINT"a     aaaaa aa a a aaa a a a a a a a a";
830 PRINT"a a a     a aa a a     a a a a a a a a";
840 PRINT"a a aaaaa aaaaaa aaaaaaa a aaa a a a a";
850 PRINT"a a                            a a a a";
860 PRINT"a aaaaaaaaaaaaaaaaaaaaaaaaaaaaaa aaa a";
870 PRINT"a                              a     a";
```

```
880 PRINT"aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa";
890 RETURN
900 DATA 205,96,187,50,47,117,201
910 RESTORE 900
920 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
930 SYMBOL AFTER 97
940 SYMBOL 97,0,127,127,127,0,247,247,247
950 SYMBOL 98,156,190,157,73,62,28,20,54
960 SYMBOL 99,28,28,8,62,93,221,212,54
970 SYMBOL 100,74,0,34,136,33,136,1,36
980 RETURN
990 MODE 1:LOCATE 1,5:A$="EL LADRON HA LOGRADO ESCAPARSE":GOSUB 240:A$="DEL POLI
CIA":GOSUB 240:PRINT:A$="GANA EL LADRON":GOSUB 240
1000 GOTO 1010
1010 REM *** GAME OVER ***
1020 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
1030 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
1040 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
1050 PEN 1:LOCATE 4,12:PRINT"TIEMPO:";USING "₧₧₧₧₧₧";T
1060 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
1070 FOR A=1 TO 50:A$=INKEY$:NEXT A
1080 PEN 1
1090 IF INKEY(60)=0 THEN RUN 220
1100 IF INKEY(46)=0 THEN CALL 0
1110 GOTO 1090
```

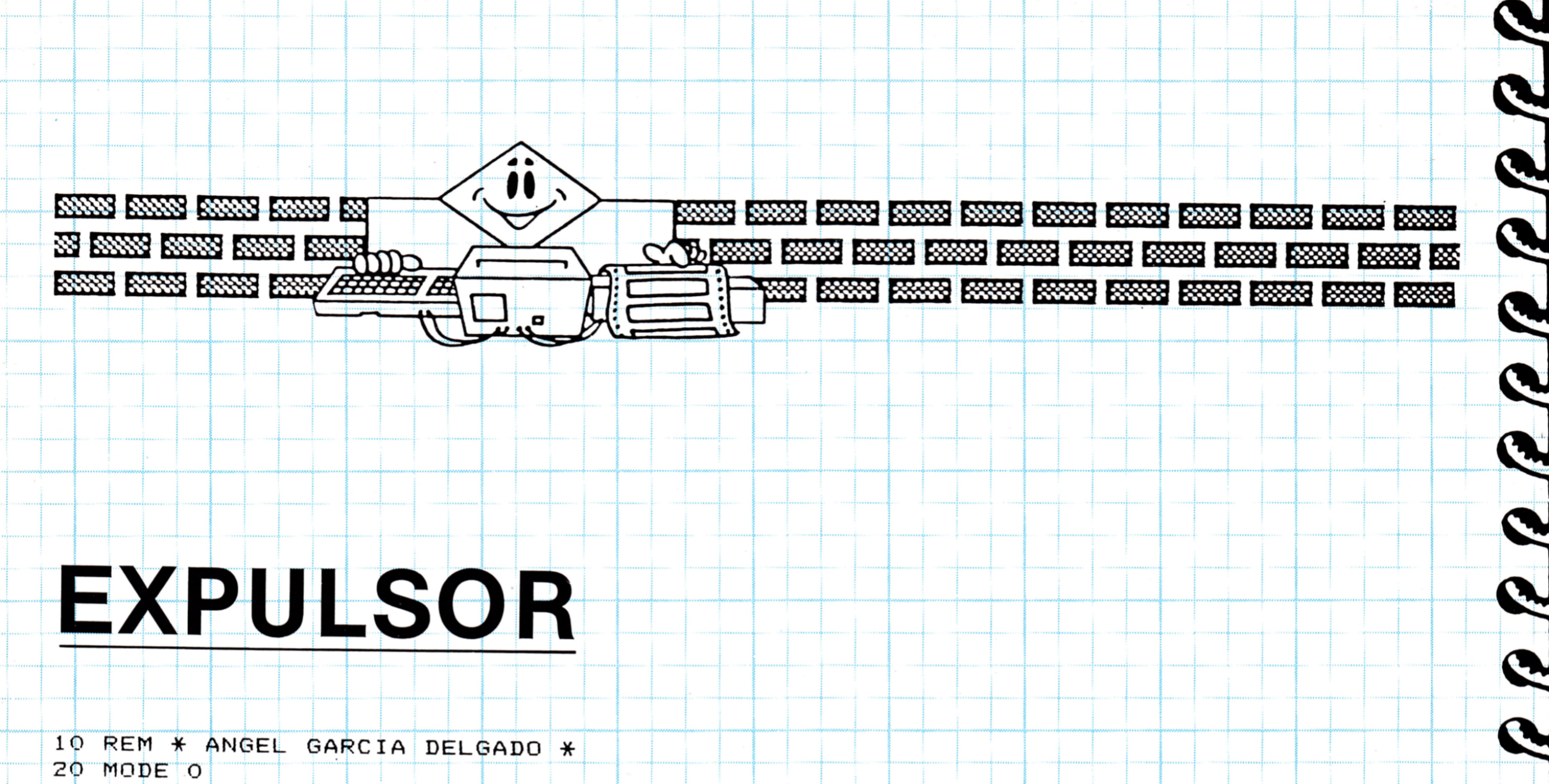




CANIBAL

```
10 REM ******* CANIBAL ********
20 REM * ANGEL GARCIA DELGADO *
30 REM ******** G.T.S. ********
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 A$="CANIBAL":A=11-(0.5*(LEN(A$)))
160 LOCATE A,12:PRINT A$;
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 a$="<< CANIBAL >>":GOSUB 270:PRINT
330 A$="MATA CON TUS FLECHAS A":GOSUB 270
340 A$="LOS CANIBALES QUE SE INTRODUZCAN":GOSUB 270:A$="EN TU CAMPAMENTO.":GOSUB
 270:PRINT:A$="CONTROLES:":GOSUB 270:A$="CURSOR ARRI
```

```
BA":GOSUB 270:A$="CURSOR ABAJO":GOSUB 270:A$="SPACE. DISPARA FLECHA":GOSUB 270
350 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 270
360 IF INKEY(60)<>0 THEN 360
370 GOSUB 650
380 BORDER 26:INK 0,26:INK 1,0:INK 2,9
390 PAPER 0:MODE 0:PEN 2
400 FOR A=1 TO 25:PRINT STRING$(20,"e");:NEXT
410 WINDOW ₧1,2,19,2,4:WINDOW 2,19,6,24:CLS ₧1:CLS
420 D=1:X=10:Y=1:P=0:FA=0
430 GOSUB 620
440 XC=1:YC=5+INT(RND*13)
450 PEN 1
460 ON D GOSUB 500,550
470 LOCATE YC,XC:PRINT" ":XC=XC+1:IF XC>17 THEN GOSUB 610
480 LOCATE YC,XC:PRINT"a":LOCATE YC,XC+1:PRINT"b"
490 GOTO 460
500 IF NOT INKEY(0) THEN X=X-1:IF X<2 THEN X=2
510 IF NOT INKEY(2) THEN X=X+1:IF X>18 THEN X=18
520 LOCATE Y,X-1:PRINT" ":LOCATE Y,X+1:PRINT" ":LOCATE Y,X:PRINT"c"
530 IF NOT INKEY(47) THEN D=2:SOUND 1,100,10,15,0,0,31
540 RETURN
550 LOCATE Y,X:PRINT" ":Y=Y+1:IF Y>17 THEN D=1:FA=FA+1:GOSUB 620:Y=1:RETURN
560 LOCATE Y,X:PRINT"c":IF Y=YC THEN IF X=XC OR X=XC+1 THEN GOSUB 580
570 RETURN
580 SOUND 2,600,20,15,0,0,10:LOCATE YC,XC:PRINT"d":LOCATE YC,XC+1:PRINT"d"
590 P=P+5:GOSUB 620
600 D=1:Y=1
610 LOCATE YC,XC:PRINT" ":LOCATE YC,XC+1:PRINT" ":XC=1:YC=5+INT(RND*13):RETURN
620 LOCATE ₧1,2,2:PRINT₧1,"PTOS:";P:LOCATE ₧1,13,2:PRINT₧1,"FA:";FA
630 IF FA>7 THEN 720
640 RETURN
650 REM SYMBOL AFTER 97
655 SYMBOL AFTER 32
660 SYMBOL 97,99,62,107,156,170,190,162,156
670 SYMBOL 98,190,221,149,157,148,148,54,119
680 SYMBOL 99,0,0,0,198,127,198,0,0
690 SYMBOL 100,137,32,10,128,17,68,0,146
700 SYMBOL 101,111,247,232,27,189,219,196,30
710 RETURN
720 REM *** GAME OVER ***
730 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
740 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
750 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
760 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "₧₧₧₧₧";P
770 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
780 FOR A=1 TO 50:A$=INKEY$:NEXT A
790 PEN 1
800 IF INKEY(60)=0 THEN RUN 250
810 IF INKEY(46)=0 THEN CALL 0
820 GOTO 800
```



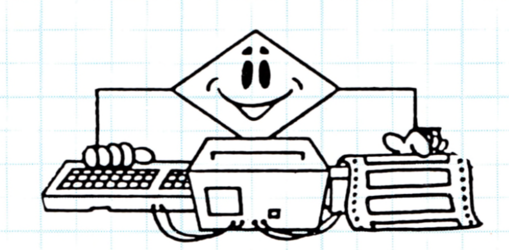
EXPULSOR

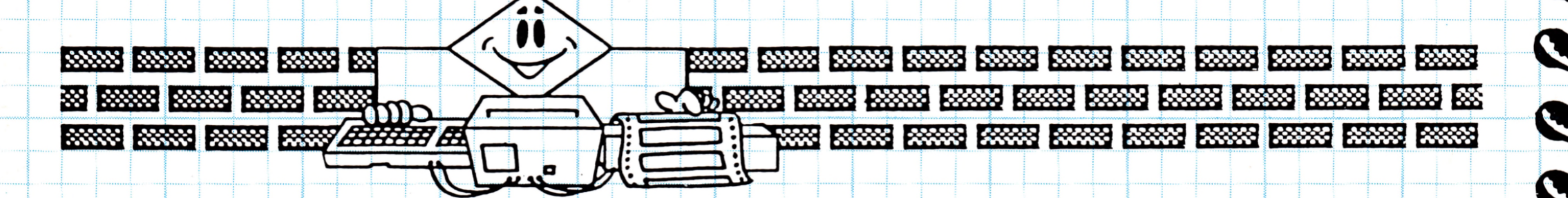
```
10 REM * ANGEL GARCIA DELGADO *
20 MODE 0
30 INK 0,0:INK 1,26:INK 2,7:INK 3,18
40 PAPER 0:BORDER 0
50 ORIGIN 318,210
60 FOR a=0 TO 2*PI STEP PI/70
70 PLOT 0,0,2
80 DRAW 300*COS(a),150*SIN(a)
90 DRAWR 0,30*SIN(a),3
100 NEXT a
110 PRINT CHR$(22)+CHR$(1);
120 A$="EXPULSOR":A=11-(0.5*(LEN(A$)))
130 LOCATE A,12:PRINT A$;
140 PRINT CHR$(22)+CHR$(0);
150 INK 2,7,0:INK 3,0,18
160 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
170 INK 2,18,7:INK 3,7,18
180 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
190 INK 2,7:INK 3,18
200 FOR a=1 TO 500:NEXT a
210 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
220 MODE 1
230 GOTO 280
240 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
250 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
260 NEXT a
270 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
280 REM *** INICIO DEL PROGRAMA ***
290 a$="<< EXPULSOR >>":GOSUB 240:PRINT
300 A$="RECOGE LAS BOLAS QUE SON":GOSUB 240:A$="EXPULSADAS POR AMBOS LADOS":GOSU
B 240:A$="CON LAS PALETAS DE QUE DISPONES":GOSUB 240
310 PRINT:A$="CONTROLES:":GOSUB 240:A$="Q. ARRIBA PALA IZQUIERDA":GOSUB 240:A$="
A. ABAJO PALA IZQ.":GOSUB 240:A$="P. ARRIBA PALA DER
ECHA":GOSUB 240:A$="L. ABAJO PALA DER.":GOSUB 240
320 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 240
```

```
330 IF INKEY(60)<>0 THEN 330
340 GOSUB 690
350 INK 0,26:BORDER 26:PAPER 0:INK 1,0:PEN 1
360 MODE 0
370 INK 2,8:INK 3,18:INK 4,6
380 PEN 2:FOR A=1 TO 25:PRINT STRING$(20,"f");:NEXT
390 WINDOW ₧1,2,19,2,4:WINDOW 2,19,6,24
400 CLS ₧1:CLS:LOCATE 9,1:PRINT"ff":LOCATE 9,19:PRINT"ff"
410 PEN 3:FOR A=2 TO 18:LOCATE 9,A:PRINT"bc":NEXT
420 P=0:FA=0:GOSUB 660
430 X1=10:X2=10
440 XB=2+INT(RND*17):YB=INT(RND*2)
450 IF YB=0 THEN YB=11:D=1
460 IF YB=1 THEN YB=8:D=-1
470 PEN 1:LOCATE 1,X1:PRINT" "
480 IF NOT INKEY(67) THEN X1=X1-1:IF X1<2 THEN X1=2
490 IF NOT INKEY(69) THEN X1=X1+1:IF X1>18 THEN X1=18
500 LOCATE 1,X1:PRINT"d"
510 LOCATE 18,X2:PRINT" "
520 IF NOT INKEY(27) THEN X2=X2-1:IF X2<2 THEN X2=2
530 IF NOT INKEY(36) THEN X2=X2+1:IF X2>18 THEN X2=18
540 LOCATE 18,X2:PRINT"e"
550 LOCATE YB,XB:PRINT" "
560 YB=YB+(D/2)
570 IF YB<2 THEN IF XB=X1 THEN GOTO 610 ELSE GOTO 630
580 IF YB>17 THEN IF XB=X2 THEN GOTO 610 ELSE GOTO 630
590 PEN 4:LOCATE YB,XB:PRINT"a"
600 GOTO 470
610 FOR A=100 TO 200 STEP 4:SOUND 1,A,1,15:NEXT:P=P+5:GOSUB 660
620 GOTO 440
630 SOUND 2,600,15,15,0,0,31
640 FA=FA+1:GOSUB 660:GOTO 440
650 GOTO 650
660 LOCATE ₧1,2,2:PRINT₧1,"PTOS:";P;:LOCATE ₧1,13,2:PRINT₧1,"FA:";FA;
670 IF FA>4 THEN 780
680 RETURN
690 SYMBOL AFTER 97
700 SYMBOL 97,60,102,223,191,191,255,126,60
710 SYMBOL 98,7,63,241,14,14,241,63,7
720 SYMBOL 99,224,252,143,112,112,143,252,224
730 SYMBOL 100,124,224,192,192,192,192,224,124
740 SYMBOL 101,62,7,3,3,3,3,7,62
750 SYMBOL 102,0,126,126,126,126,126,126,0
760 SYMBOL 103,16,69,0,146,0,164,1,72
770 RETURN
780 REM *** GAME OVER ***
790 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
800 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
810 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
820 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "₧₧₧₧₧";P
830 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
840 FOR A=1 TO 50:A$=INKEY$:NEXT A
850 PEN 1
860 IF INKEY(60)=0 THEN RUN 220
870 IF INKEY(46)=0 THEN CALL 0
880 GOTO 860
```

```
10 REM * ANGEL GARCIA DELGADO *
20 MODE 0
30 INK 0,0:INK 1,26:INK 2,7:INK 3,18
40 PAPER 0:BORDER 0
50 ORIGIN 318,210
60 FOR a=0 TO 2*PI STEP PI/70
70 PLOT 0,0,2
80 DRAW 300*COS(a),150*SIN(a)
90 DRAWR 0,30*SIN(a),3
100 NEXT a
110 PRINT CHR$(22)+CHR$(1);
120 A$="FRONTERA":A=11-(0.5*(LEN(A$)))
130 LOCATE A,12:PRINT A$;
140 PRINT CHR$(22)+CHR$(0);
150 INK 2,7,0:INK 3,0,18
160 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
170 INK 2,18,7:INK 3,7,18
180 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
190 INK 2,7:INK 3,18
200 FOR a=1 TO 500:NEXT a
210 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
220 MODE 1
230 GOTO 280
240 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
250 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
260 NEXT a
270 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
280 REM *** INICIO DEL PROGRAMA ***
290 a$="<< FRONTERA >>":GOSUB 240:PRINT
300 A$="IMPIDE QUE LOS FANTASMAS LLEGEN":GOSUB 240:A$="A LA FRONTERA QUE TU":GOS
UB 240:A$="ESTAS DEFENDIENDO.":GOSUB 240
310 PRINT:A$="CONTROLES:":GOSUB 240:A$="CURSOR ARRIBA":GOSUB 240:A$="CURSOR ABAJ
O":GOSUB 240:A$="SPACE. DISPARA":GOSUB 240
320 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 240
330 IF INKEY(60)<>0 THEN 330
340 GOSUB 590
350 PAPER 0:BORDER 3:INK 0,3:MODE 1
360 INK 1,26:INK 2,20:INK 3,15
370 PEN 3:FOR A=1 TO 25:PRINT STRING$ (40,"g");:NEXT
380 WINDOW #1,2,39,2,4:WINDOW 2,39,6,24:CLS #1:CLS
390 DIM M(19):FOR A=1 TO 19
400 N=INT(RND*2):IF N=0 THEN M(A)=1+INT(RND*4) ELSE M(A)=40-INT(RND*4)
410 NEXT
420 X=9:XB=X:P=0:GOSUB 580
430 IF NOT INKEY(0) THEN X=X-1:IF X<1 THEN X=1
440 IF NOT INKEY(2) THEN X=X+1:IF X>19 THEN X=19
450 PEN 2:LOCATE 19,XB:PRINT"  ";:LOCATE 19,X:PRINT"ab";
460 XB=X
470 IF NOT INKEY(47) THEN GOSUB 530
480 N=1+INT(RND*18)
490 LOCATE M(N),N:PRINT" ";:IF M(N)>19 THEN M(N)=M(N)-1:IF M(N)=20 THEN 680
500 IF M(N)<20 THEN M(N)=M(N)+1:IF M(N)=19 THEN 680
510 PEN 1:LOCATE M(N),N:PRINT"d";
520 GOTO 430
530 PEN 1:LOCATE 1,X:PRINT"cccccccccccccccccc";:LOCATE 21,X:PRINT"cccccccccccccc
```

```
cccc";:ENT 1,100,10,1:ENT 2,1,0,2,100,10,1:SOUND 129
,50,40,15,0,1:SOUND 130,50,40,15,0,2
540 IF M(X)>19 THEN M(X)=40 ELSE M(X)=1
550 P=P+5:GOSUB 580
560 LOCATE 1,X:PRINT"                  ";:LOCATE 21,X:PRINT"
570 RETURN
580 LOCATE ₧1,11,2:PRINT₧1,"PUNTOS......";P:RETURN
590 SYMBOL AFTER 97
600 SYMBOL 97,15,255,255,31,31,255,255,15
610 SYMBOL 98,240,255,255,248,248,255,255,240
620 SYMBOL 99,0,126,126,0,0,126,126,0
630 SYMBOL 100,62,73,109,127,65,99,127,85
640 SYMBOL 101,5,6,5,6,5,6,5,6
650 SYMBOL 102,32,32,32,32,32,32,32,32
660 SYMBOL 103,255,161,193,161,193,169,213,255
670 RETURN
680 REM *** GAME OVER ***
690 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
700 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
710 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
720 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "₧₧₧₧₧₧";P
730 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
740 FOR A=1 TO 50:A$=INKEY$:NEXT A
750 PEN 1
760 IF INKEY(60)=0 THEN RUN 220
770 IF INKEY(46)=0 THEN CALL 0
780 GOTO 760
```



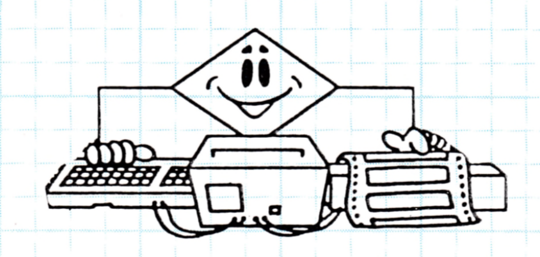


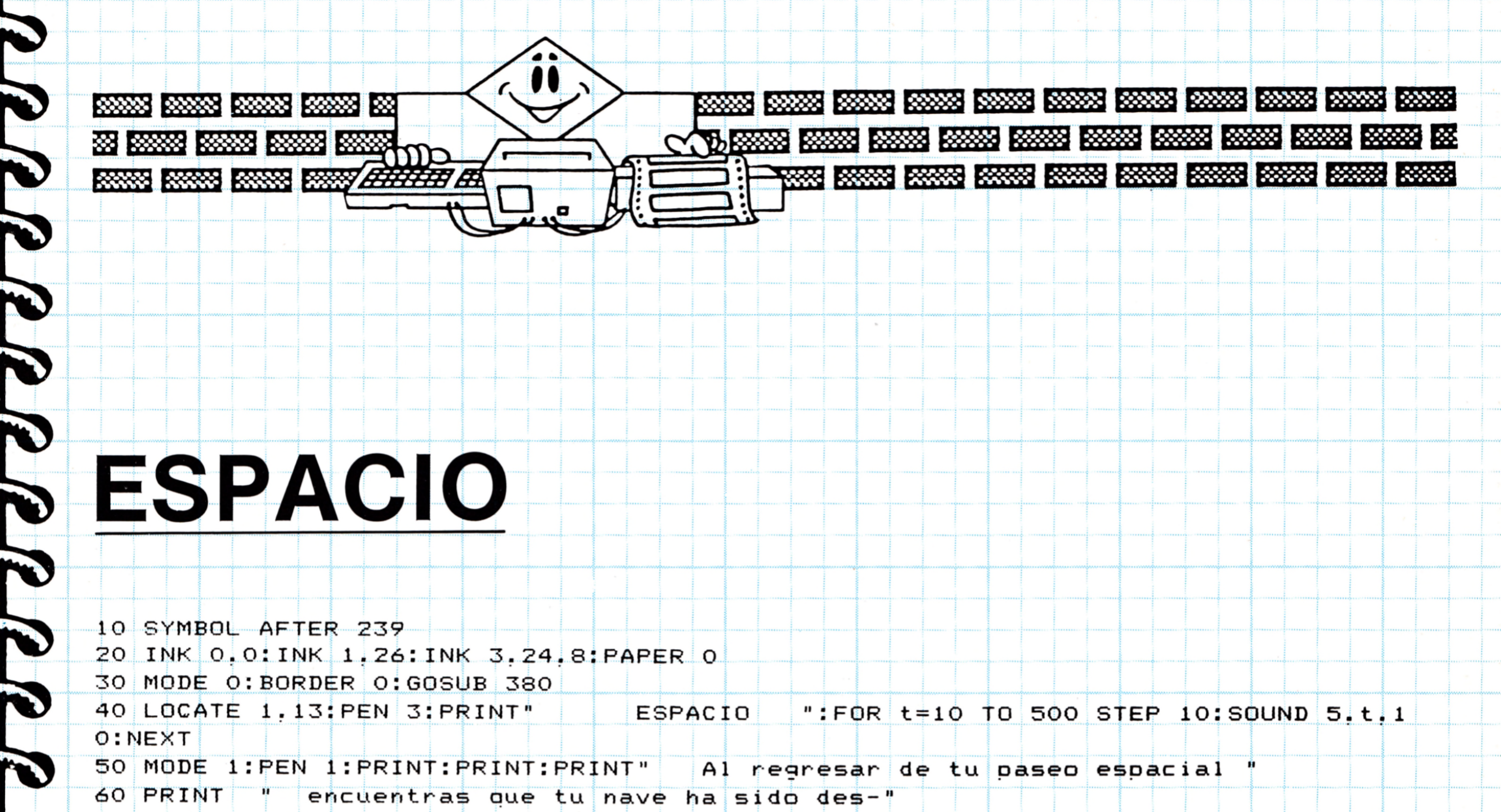
LABER-BALL

```
10 REM * ANGEL GARCIA DELGADO *
20 MODE 0
30 INK 0,0:INK 1,26:INK 2,7:INK 3,18
40 PAPER 0:BORDER 0
50 ORIGIN 318,210
60 FOR a=0 TO 2*PI STEP PI/70
70 PLOT 0,0,2
80 DRAW 300*COS(a),150*SIN(a)
90 DRAWR 0,30*SIN(a),3
100 NEXT a
110 PRINT CHR$(22)+CHR$(1);
120 A$="LABER-BALL":A=11-(0.5*(LEN(A$)))
130 LOCATE A,12:PRINT A$;
140 PRINT CHR$(22)+CHR$(0);
150 INK 2,7,0:INK 3,0,18
160 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
170 INK 2,18,7:INK 3,7,18
180 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
190 INK 2,7:INK 3,18
200 FOR a=1 TO 500:NEXT a
210 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
220 MODE 1
230 GOTO 280
240 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
250 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
260 NEXT a
270 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
280 REM *** INICIO DEL PROGRAMA ***
290 a$="<< LABER-BALL >>":GOSUB 240:PRINT
300 A$="RECOGE LAS BOLAS DISPERSAS":GOSUB 240:A$="POR EL LABERINTO, ANTES DE QUE
":GOSUB 240:A$="EL TIEMPO SE AGOTE.":GOSUB 240
310 PRINT:A$="CONTROLES:":GOSUB 240:A$="Q. ARRIBA   A. ABAJO":GOSUB 240:A$="O. I
ZQUIERDA   P. DERECHA":GOSUB 240
320 PRINT:a$="PULSA -S- PARA EMPEZAR":GOSUB 240
330 IF INKEY(60)<>0 THEN 330
```

```
340 GOSUB 830
350 INK 0,0:BORDER 0:PAPER 0:PEN 1:MODE 0
360 INK 1,26:INK 2,15
370 INK 4,24
380 WINDOW ₧1,1,20,1,3:WINDOW 1,20,4,25
390 PEN 2:GOSUB 620
400 P=0:T=250:GOSUB 590
410 PEN 3:INK 3,10,20:FOR A=1 TO 10
420 X=1+INT(RND*20):Y=1+INT(RND*20)
430 LOCATE Y,X:CALL 30000:IF PEEK(29999)=32 THEN LOCATE Y,X:PRINT"b"; ELSE 420
440 NEXT
450 X=2:Y=2:XB=X:YB=Y
460 IF NOT INKEY(67) THEN X=X-1
470 IF NOT INKEY(69) THEN X=X+1
480 IF NOT INKEY(34) THEN Y=Y-1
490 IF NOT INKEY(27) THEN Y=Y+1
500 LOCATE Y,X:CALL 30000
510 C=PEEK(29999)
520 IF C=97 THEN SOUND 1,300,2:X=XB:Y=YB
530 IF C=98 THEN BO=BO+1:FOR A=100 TO 200 STEP 5:SOUND 2,A,1:NEXT:P=P+T:GOSUB 59
0:IF BO>9 THEN 920
540 PEN 4:LOCATE YB,XB:PRINT" ";:LOCATE Y,X:PRINT"c";
550 XB=X:YB=Y
560 T=T-1:GOSUB 600
570 GOTO 460
580 GOTO 580
590 LOCATE ₧1,2,2:PRINT₧1,"PT:";P:LOCATE ₧1,11,2:PRINT₧1,"TIME:"
600 LOCATE ₧1,17,2:PRINT₧1,USING "₧₧₧";T;:IF T<1 THEN 940
610 RETURN
620 PRINT"aaaaaaaaaaaaaaaaaaaa";
630 PRINT"a          a       a";
640 PRINT"aaaaaa  aaaa       a";
650 PRINT"a          a aaaaa a";
660 PRINT"a aaaaaaaaaa a   a a";
670 PRINT"a a     a a  a   a a";
680 PRINT"a a aaa a a aa a a a";
690 PRINT"a a a a a a aaaa a a";
700 PRINT"a a a   a a      a a";
710 PRINT"a a aaaaa aaaaaaaa a";
720 PRINT"a a              a a";
730 PRINT"a a aaaaa aaa aaaa a";
740 PRINT"a a a   a a a a  a a";
750 PRINT"a a a a a a a    a a";
760 PRINT"a a a a a a a a aa a";
770 PRINT"a a aaa a a a a aa a";
780 PRINT"a a     a a   a aa a";
790 PRINT"a aaaaaaa aaaaaaaa a";
800 PRINT"a                  a";
810 PRINT"aaaaaaaaaaaaaaaaaaaa";
820 RETURN
830 DATA 205,96,187,50,47,117,201
840 RESTORE 830
850 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
860 SYMBOL AFTER 97
870 SYMBOL 97,255,129,189,189,189,189,129,255
```

```
880 SYMBOL 98,0,60,102,94,94,126,60,0
890 SYMBOL 99,0,60,90,126,66,36,90,0
900 SYMBOL 100,0,72,18,0,84,0,18,0
910 RETURN
920 ENT 1,5,-1,1,5,0,1:FOR A=300 TO 1 STEP -5:SOUND 1,A,10,15,0,1:NEXT
930 P=P+500:GOTO 940
940 REM *** GAME OVER ***
950 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
960 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
970 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
980 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "₧₧₧₧₧₧";P
990 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
1000 FOR A=1 TO 50:A$=INKEY$:NEXT A
1010 PEN 1
1020 IF INKEY(60)=0 THEN RUN 220
1030 IF INKEY(46)=0 THEN CALL 0
1040 GOTO 1020
```





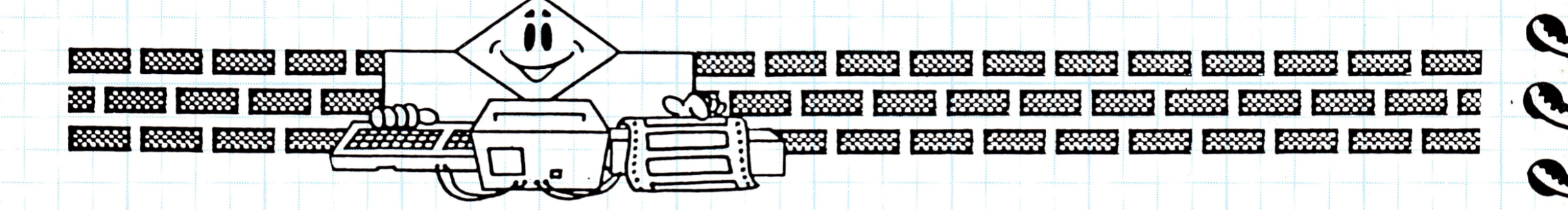
ESPACIO

```
10 SYMBOL AFTER 239
20 INK 0,0:INK 1,26:INK 3,24,8:PAPER 0
30 MODE 0:BORDER 0:GOSUB 380
40 LOCATE 1,13:PEN 3:PRINT"       ESPACIO    ":FOR t=10 TO 500 STEP 10:SOUND 5,t,1
0:NEXT
50 MODE 1:PEN 1:PRINT:PRINT:PRINT"    Al regresar de tu paseo espacial "
60 PRINT   "  encuentras que tu nave ha sido des-"
70 PRINT   "  montada por unos diminutos seres "
80 PRINT   "  galacticos. "
90 PRINT:PRINT  "    Debes recontruirla antes de que se"
100 PRINT   "  agote tu reserva de oxigeno, para "
110 PRINT   "  ello tienes que colocar sus piezas"
120 PRINT   "  sobre la plataforma de despegue "
130 PRINT   "  empezando por la base y terminando
140 PRINT   "  do por el FUEL...Pero......"
150 PRINT:PRINT    "!!TEN CUIDADO CON LOS EXTRATERRESTRES!!"
160 PRINT:PRINT:PRINT"          (UTILIZA JOYSTICK O CURSOR)"
170 LOCATE 1,22:PRINT"PARA COMENZAR EL JUEGO PULSA UNA TECLA"
180 IF INKEY$="" THEN 180 ELSE CLS
190 SYMBOL 250,24,60,90,126,60,24,231,153
200 SYMBOL 251,1,3,6,4,131,65,39,31
210 SYMBOL 252,2,1,1,2,2,2,2,6
220 SYMBOL 253,128,192,96,32,192,128,224,112
230 SYMBOL 254,200,135,128,64,64,64,64,96
240 SYMBOL 240,1,3,3,5,4,5,5,9
250 SYMBOL 241,10,10,11,10,11,10,11,10
260 SYMBOL 242,128,192,192,160,32,160,160,144
270 SYMBOL 243,80,208,80,208,80,208,80,208
280 SYMBOL 244,27,21,21,22,20,25,27,29
290 SYMBOL 245,216,168,168,104,40,152,216,184
300 SYMBOL 246,50,116,99,116,104,112,96,64
310 SYMBOL 247,76,46,198,46,22,14,6,2
320 SYMBOL 248,0,0,0,63,127,149,181,149
330 SYMBOL 249,0,0,0,240,248,44,108,44
340 SYMBOL 255,181,177,127,63,0,0,0,0
```

```
350 SYMBOL 239,108,36,248,240,0,0,0,0
360 MODE 1:INK 0,0:INK 1,26 :BORDER 0
370 PR=1
380 FOR i=1 TO 640 STEP 4
390 PLOT i,RND*400,1
400 NEXT
410 DEG
420 MOVE 20,350
430 FOR i=1 TO 360 STEP 3
440 DRAW 25+40*SIN(i),350+40*COS(i)
450 NEXT
460 MOVE 12,355:FILL 1
470 IF PR=0 THEN RETURN
480  x=340:y=340:fx=270:fy=360
490 n1x=600:n1y=265:n2x=150:n2y=350
500 m1x=-10:m2x=650:m3x=-10:m4x=650
510 LOCATE 1,24:PRINT "OXIGENO";
520 MOVE 1,15,3:DRAW 250,15:DRAW 250,0:DRAW 1,0:DRAW 1,15
530 MOVE 3,12:FILL 3
540 TAG
550 GOSUB 990
560 z= INT(TIME/300)
570 MOVE x,y,1,0:PRINT CHR$(251);:PRINT CHR$(253);
580 MOVE x,y-16:PRINT CHR$(252);:PRINT CHR$(254);
590 IF a>640 THEN a=0
600 a=a+7
610 m1x=((a)*2)MOD 640:m1y=(60*SIN(a))+240+RND*16
620 m3x=((a)*2)MOD 640:m3y=(40*SIN(a))+125+RND*16
630 m2x=((632-a)*2)MOD 640:m2y=(60*SIN(a))+200+RND*15
640 MOVE m1x,m1y,3:PRINT CHR$(250);
650 MOVE m3x,m3y,3:PRINT CHR$(250);
660 MOVE m2x,m2y:PRINT CHR$(250);
670 t=(INT(TIME/300)-z)*2
680 MOVE 400,10:DRAW 460,10:DRAW 460,0:DRAW 400,0:DRAW 400,10
690 MOVE 430,2:FILL 1
700 MOVE 250-t,15:PRINT CHR$(32);
710 IF T>250 THEN 1300
720 IF M1X+16>X AND M1X<X+32 AND M1Y-16<Y AND M1Y>Y-32 THEN TAGOFF:PRINT CHR$(7)
;:TAG:Z=Z-5
730 IF M2X+16>X AND M2X<X+32 AND M2Y-16<Y AND M2Y>Y-32 THEN TAGOFF:PRINT CHR$(7)
;:TAG:Z=Z-5
740 IF M3X+16>X AND M3X<X+32 AND M3Y-16<Y AND M3Y>Y-32 THEN TAGOFF:PRINT CHR$(7)
;:TAG:Z=Z-5
750 IF INKEY(0)<>-1 OR INKEY(72)<>-1 THEN C1=1:cy=1
760 IF INKEY(2)<>-1 OR INKEY(73)<>-1 THEN C1=1:cy=-1
770 IF INKEY(8)<>-1 OR INKEY(74)<>-1 THEN c1=1:cx=-1
780 IF INKEY(1)<>-1 OR INKEY(75)<>-1 THEN c1=1:cx=1
790 IF c1=0 GOTO 820
800 MOVE x,y,0,2:PRINT CHR$(251);:PRINT CHR$(253);
810 MOVE x,y-16,0,2:PRINT CHR$(252);:PRINT CHR$(254);:c1=0
820 IF cy=1 THEN y=y+8:cy=0
830 IF cy=-1 THEN y=y-8:cy=0
840 IF cx=1 THEN x=x+8:cx=0
850 IF cx=-1 THEN x=x-8:cx=0
860 IF x>640 THEN x=0
```

```
870 IF n1x>640 THEN n1x=x+30
880 IF n2x>640 THEN n2x=x+30
890 IF fx>640 THEN fx=x+31
900 IF x+32>n1x AND x<n1x+32 AND y>n1y-32 AND y-32<n1y THEN MOVE n1x,n1y,,2:PRIN
T CHR$(244);:PRINT CHR$(245);:MOVE n1x,n1y-16:PRINT
CHR$(246);:PRINT CHR$(247);:cn=1:GOTO 970
910 IF x+32>n2x AND x<n2x+32 AND y>n2y-32 AND y-32<n2y THEN MOVE n2x,n2y,,2:PRIN
T CHR$(240);:PRINT CHR$(242);:MOVE n2x,n2y-16:PRINT
CHR$(241);:PRINT CHR$(243);:cn=1:GOTO 1020
920 IF x+32>fx AND x<fx+32 AND y>fy-32 AND y-32<fy THEN MOVE fx,fy,,2:PRINT CHR$
(248);:PRINT CHR$(249);:MOVE fx,fy-16:PRINT CHR$(255
);:PRINT CHR$(239);:cn=1:GOTO 1070
930 MOVE m1x,m1y,,2:PRINT CHR$(32);
940 MOVE m3x,m3y:PRINT CHR$(32);
950 MOVE m2x,m2y:PRINT CHR$(32);
960 GOTO 570
970 IF cn=1 AND h=0 THEN n1x=x+30:n1y=y
980 IF n1x+24>400 AND n1x<460 AND n1y<75 THEN n1X=410:n1y=42:h=1
990 MOVE n1x,n1y,1,0:PRINT CHR$(244);:PRINT CHR$(245);
1000 MOVE n1x,n1y-16:PRINT CHR$(246);:PRINT CHR$(247);
1010 IF cn=1 THEN 930
1020 IF cn=1 AND h=1 THEN n2x=x+26:n2y=y
1030 IF n2x+24>400 AND n2x<460 AND n2y<90 AND n2y>32 THEN n2X=410:n2y=74:h=2
1040 MOVE n2x,n2y,1,0:PRINT CHR$(240);:PRINT CHR$(242);
1050 MOVE n2x,n2y-16:PRINT CHR$(241);:PRINT CHR$(243);
1060 IF cn=1 THEN 930
1070 IF cn=1 AND h=2 THEN fx=x+31:fy=y
1080 IF fx+20>400 AND fx<450 AND fy<100 THEN fX=410:fy=-20:y=-20:GOTO 1130
1090 MOVE fx,fy,1,3:PRINT CHR$(248);:PRINT CHR$(249);
1100 MOVE fx,fy-16:PRINT CHR$(255);:PRINT CHR$(239);
1110 IF cn=1 THEN 930
1120 RETURN
1130 n2y=n2y+7:n1y=n1y+7
1140 n1x=n1x-2:n2x=n2x-2
1150 MOVE n2x,n2y,1,0:PRINT CHR$(240);:PRINT CHR$(242);
1160 MOVE n2x,n2y-16:PRINT CHR$(241);:PRINT CHR$(243);
1170 MOVE n1x,n1y:PRINT CHR$(244);:PRINT CHR$(245);
1180 MOVE n1x,n1y-16:PRINT CHR$(246);:PRINT CHR$(247);
1190 FRAME:FRAME:FRAME:FRAME:FRAME
1200 IF n1y>430 THEN 1270
1210 MOVE n2x,n2y,0,2:PRINT CHR$(240);:PRINT CHR$(242);
1220 MOVE n2x,n2y-16:PRINT CHR$(241);:PRINT CHR$(243);
1230 MOVE n1x,n1y:PRINT CHR$(244);:PRINT CHR$(245);
1240 MOVE n1x,n1y-16:PRINT CHR$(246);:PRINT CHR$(247);
1250 MOVE n1x,n1y-23:PRINT CHR$(143);:PRINT CHR$(143);
1260 GOTO 1130
1270 MODE 1: BORDER 17 :INK 0,26 :INK 1,0
1280 LOCATE 1,10 :PRINT "*** !! ENHORABUENA LO COSEGUISTES !! ***"
1290 GOTO 1340
1300 MODE 1: BORDER 17 :INK 0,26 :INK 1,0
1310 LOCATE 5,10 :PRINT "*** LO SIENTO TE HAS QUEDADO ***"
1320 PRINT:PRINT"     ***        SIN OXIGENO         ***"
1330 GOTO 1340
1340 LOCATE 1,19:PRINT "    *** LO INTENTAS DE NUEVO ¡S/N¿ ***"
1350 A$=INKEY$
```

```
1360 IF A$="S" OR A$="s" THEN CLEAR:GOTO 190
1370 IF A$="N" OR A$="n" THEN CLS:END
1380 GOTO 1350
```



FANTASMA

```
10 CLEAR
20 REM &&&&&&&& PRESENTACION &&&&&&&&
30 MODE 0:INK 0,0:BORDER 0
40 INK 1,3
50 CLS
60 LOCATE 3,6:PRINT"F A N T A S M A"
70 SOUND 1,568,20,7:SOUND 1,638,20,7:SOUND 1,568,150,7:SOUND 1,758,40,7:SOUND 1,
716,40,7:SOUND 1,758,40,7:SOUND 1,851,40,7:SOUND 1,9
56,40,7:SOUND 1,902,170,7:SOUND 1,851,170,7
80 FOR X=1 TO 700:NEXT
90 FOR SA1=1 TO 18
100 LOCATE 4,SA1:PRINT CHR$(149):FOR RET=1 TO 200:NEXT RET:NEXT SA1
110 FOR SA2=1 TO 24
120 LOCATE 16,SA2:PRINT CHR$(133):FOR RET=1 TO 200:NEXT RET:NEXT SA2
130 FOR SA3=1 TO 13
140 LOCATE 12,SA3:PRINT CHR$(133):FOR RET=1 TO 200:NEXT RET:NEXT SA3
150 FOR SA4=1 TO 7
160 LOCATE 19,SA4:PRINT CHR$(149):FOR RET=1 TO 200:NEXT RET:NEXT SA4
170 FOR SA5=1 TO 20
180 LOCATE 8,SA5:PRINT CHR$(138):FOR RET=1 TO 200:NEXT RET:NEXT SA5
190 FOR SA6=1 TO 15
200 LOCATE 14,SA6:PRINT CHR$(149):FOR RET=1 TO 200:NEXT RET:NEXT SA6
210 CO=0
220 X=INT(RND(1)*20)
230 Y=INT(RND(1)*24)
240 IF (Y>24 OR Y<1) OR (X>20 OR X<1) THEN 220
250 LOCATE X,Y:PRINT CHR$(143)
260 SOUND 1,Y,X:SOUND 1,CO,Y
270 CO=CO+1
280 IF CO>200 THEN 300
290 GOTO 220
300 MODE 1
```

```
310 INK 0,1:INK 1,16:CLS
320 REM &&&&&& INSTRUCCIONES &&&&&
330 LOCATE 12,3:PRINT"F A N T A S M A"
340 LOCATE 12,4:PRINT"==============="
350 LOCATE 1,6:PRINT"Te encuentras en un oscuro bosque de las tierras del mas al
la, y delante de ti se planta una casa plagada de fa
ntasmas horribles que quieren volverte loco."
360 PRINT"Con la ayuda de tu tirachinas debes intentar acabar con ellos en un ti
empo limite, o de lo contrario te veras perdido."
370 PRINT:PRINT"              4           5           6"
380 PRINT"           ";CHR$(241);"          ";CHR$(241);"           ";CHR$(241)

390 PRINT "       VENTANA   VENTANA   VENTANA"
400 PRINT "      IZQUIERDA  CENTRAL   DERECHA"
410 PRINT:PRINT"             1           2          3"
420 PRINT"           ";CHR$(241);"          ";CHR$(241);"           ";CHR$(241)
430 PRINT "        PUERTA    PUERTA    PUERTA"
440 PRINT "      IZQUIERDA   CENTRAL   DERECHA"
450 PEN 3:LOCATE 13,24:PRINT"PULSA UNA TECLA"
460 F$=INKEY$
470 IF F$="" THEN 460 ELSE 480
480 MODE 0
490 PAPER 5:BORDER 1:INK 1,26:CLS
500 TIEMPO=0

510 REM ====== FANTASMAS ======
520 REM ===MARCEL RISQUES 85===
530 REM ======================
540 REM &&&&&&&& ESTRELLAS &&&&&&&&
550 A=0
560 ESTREX=INT(RND(1)*640):ESTREY=INT(RND(1)*400)
570 PLOT ESTREX,ESTREY:A=A+1
580 IF A=100 THEN 600
590 GOTO 560
600 REM &&&&&&&&& CASA &&&&&&&&&
610 FOR XCASA=4 TO 17
620 FOR YCASA=7 TO 17
630 PEN 3:LOCATE XCASA,YCASA:PRINT CHR$(143):NEXT:NEXT

640 REM &&&&&&&&&& SUELO &&&&&&&&&&
650 FOR SUEX=1 TO 20:FOR SUEY=18 TO 25
660 PEN 9:LOCATE SUEX,SUEY:PRINT CHR$(127):NEXT:NEXT

670 REM &&&&&&&&&& VENTANAS &&&&&&&&&&
680 SOUND 1,18,10,5:SOUND 1,1000,4:SOUND 1,200,12,7:SOUND 1,100,18,4
690 X=0:PEN 8:LOCATE 5,9:PRINT CHR$(131):LOCATE 6,9:PRINT CHR$(131):LOCATE 5,10:
PRINT CHR$(140):LOCATE 6,10:PRINT CHR$(140)
700 LOCATE 10,9:PRINT CHR$(131):LOCATE 11,9:PRINT CHR$(131):LOCATE 10,10:PRINT C
HR$(140):LOCATE 11,10:PRINT CHR$(140)
710 LOCATE 15,9:PRINT CHR$(131):LOCATE 16,9:PRINT CHR$(131):LOCATE 15,10:PRINT C
HR$(140):LOCATE 16,10:PRINT CHR$(140)
720 REM &&&&&&&&&&& PUERTAS &&&&&&&&&&&
730 FOR YPUERTAS=14 TO 16
740 LOCATE 6,YPUERTAS:PRINT CHR$(206):LOCATE 7,YPUERTAS:PRINT CHR$(206)
750 LOCATE 10,YPUERTAS:PRINT CHR$(206):LOCATE 11,YPUERTAS:PRINT CHR$(206)
760 LOCATE 14,YPUERTAS:PRINT CHR$(206):LOCATE 15,YPUERTAS:PRINT CHR$(206):NEXT
```

```
760 LOCATE 14,YPUERTAS:PRINT CHR$(206):LOCATE 15,YPUERTAS:PRINT CHR$(206):NEXT

770 REM &&&&&&&&&& LUNA &&&&&&&&&&&&
780 PEN 2:LOCATE 2,2:PRINT CHR$(214):LOCATE 2,3:PRINT CHR$(143):LOCATE 2,4:PRINT
 CHR$(213):LOCATE 3,2:PRINT CHR$(212):LOCATE 3,4:PRI
NT CHR$(215)
790 REM &&&&&&&&&&&&FANTASMAS&&&&&&&&&&
800 PEN 4
810  FAN=INT(RND(1)*6+1)
820 IF FAN<1 OR FAN>6 THEN 810
830 IF FAN=1 THEN LOCATE 5,10;PRINT CHR$(224):FOR TI=1 TO 320:X=1:NEXT:GOTO 890
840 IF FAN=2 THEN LOCATE 11,10:PRINT CHR$(224):FOR TI=1 TO 320:X=2:NEXT:GOTO 890
850 IF FAN=3 THEN LOCATE 15,10:PRINT CHR$(224):FOR TI=1 TO 320:X=3:NEXT:GOTO 890
860 IF FAN=4 THEN LOCATE 7,15:PRINT CHR$(224):LOCATE 7,16:PRINT CHR$(253):FOR TI
=1 TO 320:X=4:NEXT:GOTO 890
870 IF FAN=5 THEN LOCATE 10,15:PRINT CHR$(224):LOCATE 10,16:PRINT CHR$(253):FOR
TI=1 TO 320:X=5:NEXT:X=1:GOTO 890
880 IF FAN=6 THEN LOCATE 15,15:PRINT CHR$(224):LOCATE 15,16:PRINT CHR$(253):FOR
TI=1 TO 320:X=6:NEXT:GOTO 890
890 REM &&&&&&&&&& DISPAROS &&&&&&&&&&
900 A$=INKEY$:IF A$="4" AND X=1 THEN LOCATE 5,10:PRINT CHR$(225):FOR TI=1 TO 300
:NEXT:LOCATE 5,10:PRINT CHR$(238):SOUND 1,50,20:PUNT
OS=PUNTOS+1:GOTO 670
910 A$=INKEY$:IF A$="5" AND X=2 THEN LOCATE 11,10:PRINT CHR$(225):FOR TI=1 TO 30
0:NEXT:LOCATE 11,10:PRINT CHR$(238):SOUND 1,50,20:PU
NTOS=PUNTOS+1:GOTO 670
920 A$=INKEY$:IF A$="6" AND X=3 THEN LOCATE 15,10:PRINT CHR$(225):FOR TI=1 TO 30
0:NEXT:LOCATE 15,10:PRINT CHR$(238):SOUND 1,50,20:PU
NTOS=PUNTOS+1:GOTO 670
930 A$=INKEY$:IF A$="1" AND X=4 THEN LOCATE 7,15:PRINT CHR$(225):FOR TI=1 TO 300
:NEXT:LOCATE 7,15:PRINT CHR$(238):SOUND 1,50,20:PUNT
OS=PUNTOS+1:GOTO 670
940 A$=INKEY$:IF A$="2" AND X=5 THEN LOCATE 10,15:PRINT CHR$(225):FOR TI=1 TO 30
0:NEXT:LOCATE 10,15:PRINT CHR$(238)SOUND 1,50,20:PUN
TOS=PUNTOS+1:GOTO 670
950 A$=INKEY$:IF A$="3" AND X=6 THEN LOCATE 15,15:PRINT CHR$(225):FOR TI=1 TO 30
0:NEXT:LOCATE 15,15:PRINT CHR$(238):SOUND 1,50,20:PU
NTOS=PUNTOS+1:GOTO 670
960 REM &&&&&&&& MARCADOR &&&&&&&&
970 PEN 3
980 PEN 6:LOCATE 8,24:PRINT "PUNTOS: ";PUNTOS
990 REM &&&&&&&& TIEMPO &&&&&&&&
1000 TIEMPO=TIEMPO+1
1010 IF TIEMPO=40 THEN 1030
1020 GOTO 670
1030 REM &&&&&&& OTRA PARTIDA &&&&&&&
1040 CLS:PEN 12
1050 LOCATE 4,18:PRINT"PUNTUACION: ";PUNTOS
1060 LOCATE 3,8:PRINT"GRACIAS CAMPEON"
1070 LOCATE 2,25:PRINT"OTRA PARTIDA (S/N)"
1080 L$=INKEY$
1090 IF L$="S" OR L$="s"  THEN 10
1100 IF L$="N" OR L$="n" THEN MODE 1:PAPER 0:PEN 3
1110 IF  NOT (L$="S" OR L$="s") AND NOT (L$="N" OR L$="n")  THEN 1080
1120 IF L$="" THEN 1080
```

BIBLIOGRAFIA

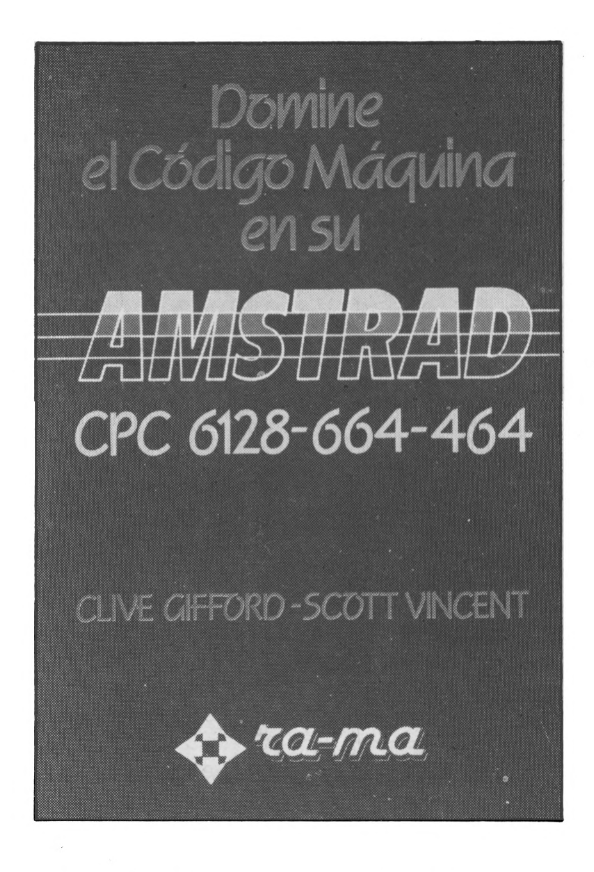


EL DOMINIO DEL AMSTRAD PCW 8256/8512

"El dominio del Amstrad PCW 8256/8512" le sitúa en la vía rápida hacia el éxito en los negocios. Lo mismo si está Vd. empezando a utilizar uno de estos ordenadores, como si está considerando comprárselo, este libro le mostrará rápidamente cómo rentabilizar al máximo su inversión.

Una gran parte del libro trata del proceso de texto.

Esta parte del libro es un medio didáctico excelente, que le conducirá desde los usos más sencillos del proceso de textos, a los más avanzados. Una sección aparte cubre el uso de NewWord, la potente alternativa de NewStarSoftware.



DOMINE EL CODIGO MAQUINA EN SU AMSTRAD

Ahora tiene la oportunidad de aprender a programar en código máquina en su ordenador Amstrad. Clive y Scott —dos programadores muy competentes, con gran experiencia en libros y software a sus espaldas— son los guías ideales para ayudarle a comprender las interioridades de la programación en código máquina del Amstrad.

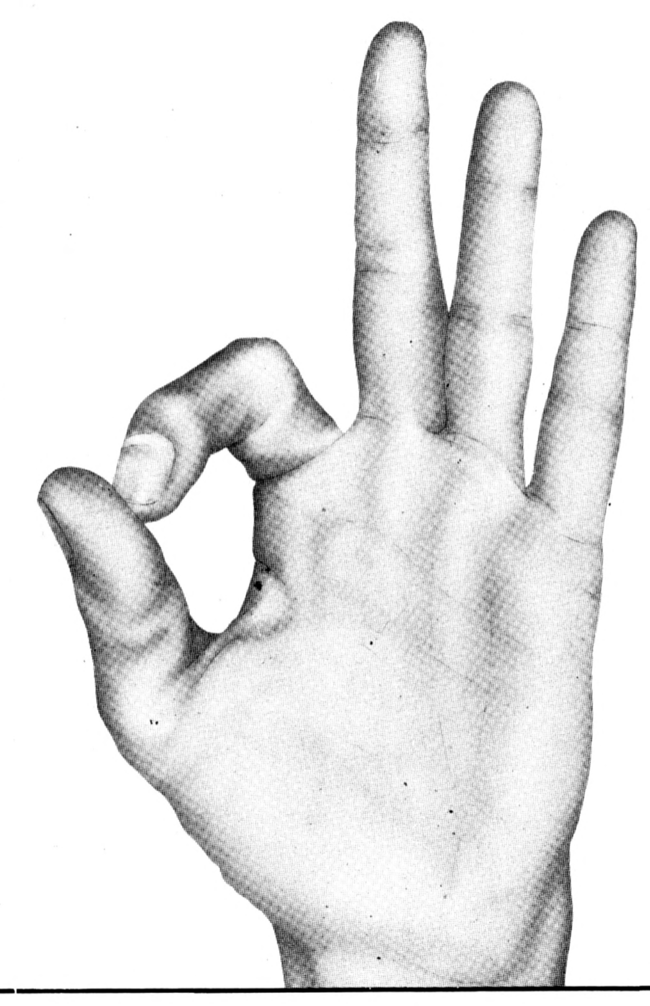
Debe ir trabajando en código máquina del Amstrad.

Debe ir trabajando a lo largo del libro, saltándose las secciones que le presentan una especial dificultad la primera vez que las lea. Cuando haya terminado su primera lectura, tendrá los suficientes conocimientos como para poder comprender aquellas secciones que dejó sin completar la primera vez que pasó por ellas.

AMIGOS DEL AMSTRAD

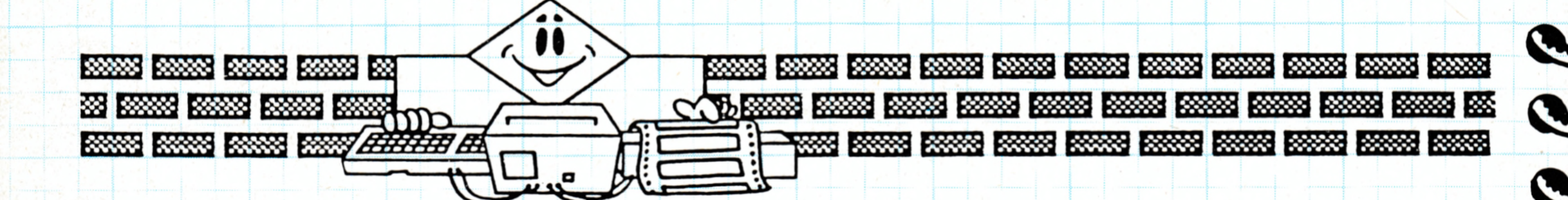
EDITORIAL

Todos los meses, con la revista, pretendemos que sea una guía práctica, incluyendo gran variedad de programas para que puedas disfrutar mientras aprendes.
Encontrarás programas que te mostrarán cómo construir imágenes de cualquier forma y a la vez utilizar el color.
También verás cómo se usan los sprites y a diseñar tus propios caracteres.
Otros programas te mostrarán cómo aplicar gráficos de alta resolución, a producir efectos sonoros y música.
Diviértete.



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SUMARIO



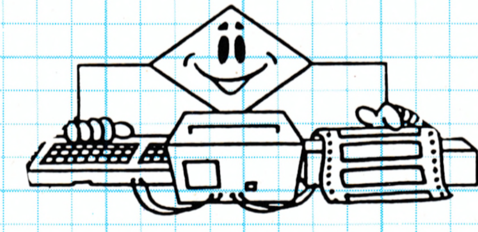
EXPLICACION DE LOS PROGRAMAS

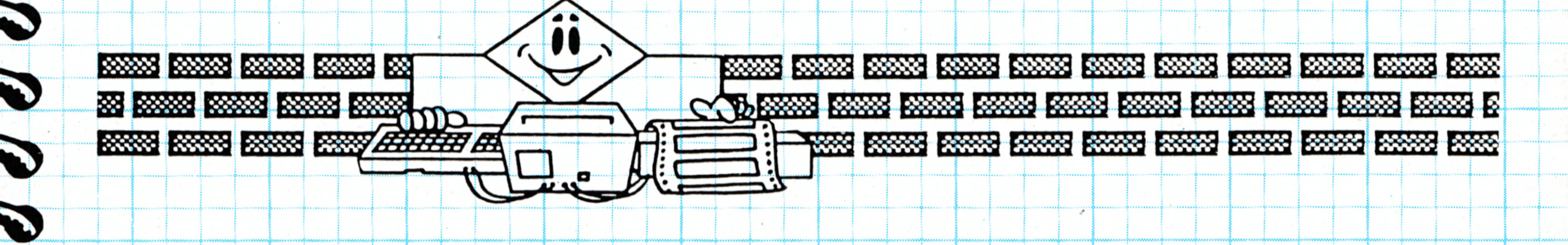
JOE LOVE

```
10 REM ***** JOE LOVE *****
20 REM * ANGEL GARCIA D. **
30 REM ****** G.T.S. ******
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 PEN 1
90 ORIGIN 318,210
100 FOR a=0 TO 2*PI STEP PI/70
110 PLOT 0,0,2
120 DRAW 300*COS(a),150*SIN(a)
130 DRAWR 0,30*SIN(a),3
140 NEXT a
150 PRINT CHR$(22)+CHR$(1);
160 LOCATE 7,12
170 PRINT "JOE LOVE"
180 PRINT CHR$(22)+CHR$(0);
190 INK 2,7,0:INK 3,0,18
200 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
210 INK 2,18,7:INK 3,7,18
220 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
230 INK 2,7:INK 3,18
240 FOR a=1 TO 500:NEXT a
250 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
```

```
260 MODE 1
270 GOTO 320
280 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
290 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
300 NEXT a
310 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
320 REM *** INICIO DEL PROGRAMA ***
330 a$="<<< JOE LOVE >>>":GOSUB 280
340 PRINT:A$="AYUDA A JOE A RECUPERAR":GOSUB 280
350 A$="LOS CORAZONES PERDIDOS, NECESARIOS":GOSUB 280
360 A$="PARA CONSEGUIR EL AMOR DE SU CHICA.":GOSUB 280
370 A$="PERO TEN CUIDADO CON LAS HIENAS":GOSUB 280
380 PRINT:A$="USA: TECLADO (Q.A.O.P) O JOYSTICK":GOSUB 280
390 PRINT:A$="PULSA UNA TECLA PARA EMPEZAR":GOSUB 280
400 A$=INKEY$:IF INKEY$="" THEN 400
410 PRINT CHR$(7);
420 GOSUB 950:GOSUB 850
430 V=3
440 MODE 1:INK 0,26:INK 1,0:INK 2,15:INK 3,2
450 PAPER 0:BORDER 26:CLS
460 WINDOW 1,40,4,25:PEN 1:CLS
470 WINDOW #1,1,40,1,3:PAPER#1,2:PEN#1,0:CLS#1
480 GOSUB 830
490 RESTORE 740:D=40000
500 READ A:POKE D,A:D=D+1
510 IF A=255 THEN GOTO 530
520 GOTO 500
530 DEFINT X,Y:X=10:Y=20
540 H=1+INT(RND*19):I=1+INT(RND*39):POKE 40015,H:POKE 40016,I:FOR B=100 TO 200 S
TEP 10:SOUND 2,B,1,15:NEXT B
550 GOSUB 830
560 CALL 32768
570 IF PEEK(39999)=1 THEN GOSUB 670:GOTO 440
580 IF INKEY(67)=0 OR JOY(0)=1 THEN X=X-1:IF X<1 THEN X=1
590 IF INKEY(69)=0 OR JOY(0)=2 THEN X=X+1:IF X>20 THEN X=20
600 IF INKEY(34)=0 OR JOY(0)=4 THEN Y=Y-1:IF Y<1 THEN Y=1
610 IF INKEY(27)=0 OR JOY(0)=8 THEN Y=Y+1:IF Y>39 THEN Y=39
620 POKE 40003,X:POKE 40004,Y
630 IF X=H AND Y=I THEN P=P+15:GOTO 540
640 IF X+1=H AND Y+1=I THEN P=P+15:GOTO 540
650 GOTO 560
660 DATA 1,10,10,2,1,20,2,1,15,1,172,176
670 POKE 40010,180:POKE 40011,184
680 FOR A=0 TO 255 STEP 10:SOUND 1,A,10,15,0,0,31:CALL 32768:NEXT A
690 V=V-1: IF V>=0 THEN RETURN
700 FOR a=0 TO 40:PRINT CHR$(7):A$=INKEY$:NEXT a
710 PEN 1:LOCATE 16,11:PRINT"GAME OVER"
720 IF INKEY$="" THEN 720
730 RUN 430
740 DATA 3,10,20,10,20,0,0,0,0,1,160,164
750 DATA 3,10,10,10,10,0,0,0,0,2,168,168
760 DATA 1,12,12,1,2,20,0,1,39,2,172,176
770 DATA 1,15,15,0,2,20,1,2,39,3,176,172
780 DATA 1,10,10,2,2,20,2,2,39,2,172,176
790 DATA 1,10,25,2,3,18,0,5,35,3,176,172
800 DATA 1,5,30,0,1,20,2,1,39,2,172,176
810 DATA 1,5,10,2,1,20,2,1,39,2,172,176
820 DATA 255
830 LOCATE#1,2,2:PRINT#1,"PUNTOS:";P;TAB(27);"VIDAS:";V
840 RETURN
```

```
850 DATA 3E00323F9CCD54BBFD21409CFD7E00FEFFC8FE04CAC680FD6E01FD6602FE02281A3E20C
DF58024CDF5802CCDF58025CDF5802DFD7E00FE03CA2A81FD7E0
3FE012820
860 DATA FE00200D2D7DFDBE042015FD360302180FFE02200B2C7DFDBE052004FD360300FD7501F
D7E06FE012820FE00200D257CFDBE072015FD360602180FFE022
00B247CFD
870 DATA BE082004FD360600FD7402FD7E09CD90BBFD7E0AFD460BFD770BFD700AFD6E01FD6602C
DF5803C24CDF580252C3CCDF580243CCDF580FD7E00FE0328052
52DCDE180
880 DATA FD23FD23FD23FD23FD23FD23FD23FD23FD23FD23FD23FD23C30C80ED4B419CCD068124C
D06812CCD068125CD0681C9FDE5E5F5CD75BBF1F5CD5DBBF1E1F
DE1C9C5CD
890 DATA 188104CD18810CCD188105CD1881C1C9E57CB8C228817DB9C22881213F9C3601E1C9FD6
603FD6E04FD7401FD7502C38F80C390EA00000000
900 DATA Z
910 RESTORE 850:D=32768
920 READ A$:N=LEN(A$):IF A$="Z" THEN RETURN
930 FOR A=1 TO N STEP 2:B$="&"+MID$(A$,A,2)
940 POKE D,VAL(B$):D=D+1:NEXT A:GOTO 920
950 SYMBOL AFTER 160
960 SYMBOL 160,3,14,29,29,63,56,54,48
970 SYMBOL 161,192,240,248,248,252,28,108,12
980 SYMBOL 162,124,255,207,10,15,15,30,62
990 SYMBOL 163,62,254,247,83,243,248,124,0
1000 SYMBOL 164,3,14,29,29,63,56,54,48
1010 SYMBOL 165,192,240,248,248,252,28,108,12
1020 SYMBOL 166,124,127,239,202,207,31,62,0
1030 SYMBOL 167,62,255,243,80,240,240,120,124
1040 SYMBOL 168,60,102,207,159,191,191,255,255
1050 SYMBOL 169,60,126,255,127,191,191,255,255
1060 SYMBOL 170,127,127,63,63,31,15,7,1
1070 SYMBOL 171,254,254,252,252,248,240,224,128
1080 SYMBOL 172,225,185,159,150,127,89,247,215
1090 SYMBOL 173,135,157,249,105,254,154,239,235
1100 SYMBOL 174,255,117,113,184,62,103,227,196
1110 SYMBOL 175,255,94,78,29,188,230,199,35
1120 SYMBOL 176,225,185,159,159,125,119,191,241
1130 SYMBOL 177,135,157,249,249,190,238,253,143
1140 SYMBOL 178,255,117,251,62,127,231,196,0
1150 SYMBOL 179,255,94,111,188,254,231,35,0
1160 SYMBOL 180,33,20,65,23,74,51,159,55
1170 SYMBOL 181,64,20,161,234,80,202,248,237
1180 SYMBOL 182,183,31,83,10,87,133,40,2
1190 SYMBOL 183,236,249,204,82,232,130,40,132
1200 SYMBOL 184,137,32,8,34,128,20,1,72
1210 SYMBOL 185,137,32,8,34,128,20,1,72
1220 SYMBOL 186,137,32,8,34,128,20,1,72
1230 SYMBOL 187,137,32,8,34,128,20,1,72
1240 RETURN
```



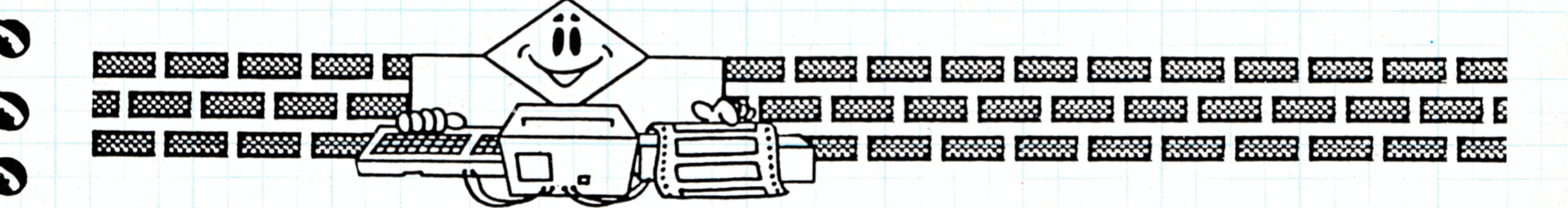


BATERIAS ANTIAEREAS

```
10 REM *** BATERIAS ANTIAEREAS ***
20 REM *  ANGEL GARCIA DELGADO  **
30 REM ********** G.T.S. *********
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 7,12
160 PRINT "BATERIAS"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<<< BATERIAS ANTIAEREAS >>>":GOSUB 270
330 PRINT:A$="DERRIBA A LOS AVIONES ENEMIGOS QUE":GOSUB 270
340 A$="INVADEN TU ESPACIO AEREO":GOSUB 270
350 PRINT:A$="PARA HACERLO PULSA F1,F2 O F3":GOSUB 270
360 PRINT:PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
370 IF INKEY(60)<>0 THEN GOTO 370
380 GOSUB 1010
390 ac=0
400 fa=0
```

```
410 INK 0,20
420 INK 1,0
430 INK 2,3
440 MODE 1
450 PAPER 0
460 BORDER 20
470 PEN 2
480 a$=""
490 FOR a=1 TO 9
500 a$=a$+CHR$(163):NEXT a
510 b$=a$+CHR$(164)+a$+CHR$(165)+a$+CHR$(166)+a$
520 LOCATE 1,23
530 PRINT b$;
540 LOCATE 10,22:PRINT CHR$(162)
550 LOCATE 20,22:PRINT CHR$(162)
560 LOCATE 30,22:PRINT CHR$(162)
570 GOSUB 830
580 Z$="  "+CHR$(160)+CHR$(161):X$="
590 D=1
600 X=2+INT(RND*20)
610 Y=1
620 ON D GOSUB 690,730
630 Y=Y+1:IF Y>37 THEN LOCATE Y,X:PRINT"   ":GOTO 600
640 PEN 1
650 LOCATE Y,X:PRINT Z$
660 SOUND 1,1000,1
670 IF D=2 THEN IF H=X THEN IF I=Y+1 OR I=Y+2 THEN GOTO 780
680 GOTO 620
690 H=21:IF INKEY(13)=0 THEN D=2:I=10
700 IF INKEY(14)=0 THEN D=2:I=20
710 IF INKEY(5)=0 THEN D=2:I=30
720 RETURN
730 PEN 1:LOCATE I,H:PRINT" "
740 H=H-1:IF H<2 THEN SOUND 3,100,10:D=1:FA=FA+1:GOSUB 830:RETURN
750 LOCATE I,H:PRINT CHR$(239)
760 SOUND 2,50-H,1
770 RETURN
780 LOCATE I,H:PRINT CHR$(238)
790 FOR A=1000 TO 1100:SOUND 1,A,1:NEXT A
800 AC=AC+1:GOSUB 830
810 LOCATE I,H:PRINT" ":LOCATE Y,X:PRINT"    "
820 GOTO 590
830 PEN 2:LOCATE 3,1:PRINT" DERRIBADOS: ";USING "###";AC
840 LOCATE 25,1:PRINT"FALLOS: ";USING "##";FA
850 IF FA>14 THEN 870
860 RETURN
870 FOR B=15 TO 30
880 FOR A=100 TO 1000 STEP B
890 SOUND 1,A,1
900 NEXT A
910 NEXT B
920 MODE 0
930 PEN 2
940 LOCATE 6,8:PRINT"GAME OVER"
950 INK 2,3,20
960 PEN 1
970 LOCATE 4,13:PRINT"PUNTOS:";USING "######";AC*15
980 FOR A=1 TO 6000:NEXT A
990 GOTO 250
1000 LOCATE 1,1:END
```

```
1010 SYMBOL AFTER 160
1020 SYMBOL 160,64,224,227,255,127,7,0,0
1030 SYMBOL 161,0,2,192,250,255,250,0,2
1040 SYMBOL 162,60,36,44,44,44,44,110,255
1050 SYMBOL 163,255,255,255,255,255,255,255,255
1060 SYMBOL 164,255,247,231,199,247,247,195,255
1070 SYMBOL 165,255,195,129,249,195,159,129,255
1080 SYMBOL 166,255,195,129,249,227,185,195,255
1090 RETURN
```

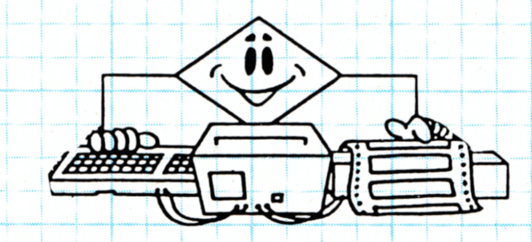


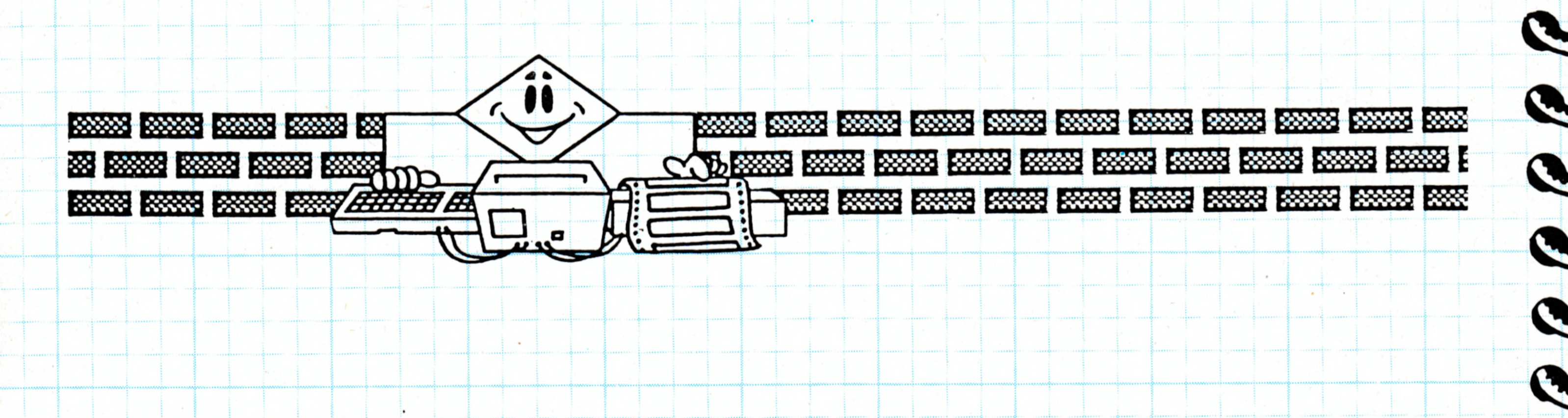
MOSQUITOS

```
10 REM ******* MOSQUITOS ******
20 REM * ANGEL GARCIA DELGADO *
30 REM ******* G.T.S. *********
40 MODE 0
50 INK 0,0:INK 1,26:INK 2,7:INK 3,18
60 PAPER 0:BORDER 0
70 ORIGIN 318,210
80 FOR a=0 TO 2*PI STEP PI/70
90 PLOT 0,0,2
100 DRAW 300*COS(a),150*SIN(a)
110 DRAWR 0,30*SIN(a),3
120 NEXT a
130 PRINT CHR$(22)+CHR$(1);
140 LOCATE 7,12
150 PRINT "MOSQUITOS"
160 PRINT CHR$(22)+CHR$(0);
170 INK 2,7,0:INK 3,0,18
180 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
190 INK 2,18,7:INK 3,7,18
200 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
```

```
210 INK 2,7:INK 3,18
220 FOR a=1 TO 500:NEXT a
230 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
240 MODE 1
250 GOTO 300
260 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
270 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
280 NEXT a
290 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
300 REM *** INICIO DEL PROGRAMA ***
310 A$="<<< MOSQUITOS >>>":GOSUB 260
320 PRINT:A$="CON LA LLEGADA DEL VERANO VUELVEN":GOSUB 260
330 A$="LOS INDESEABLES MOSQUITOS. ELIMINA":GOSUB 260
340 A$="A LOS MOSQUITOS PEQUENNOS, PERO SIN":GOSUB 260
350 A$="TOCAR A LOS MAS GRANDES":GOSUB 260
360 PRINT:A$="Q. ARRIBA":GOSUB 260
370 A$="A. ABAJO":GOSUB 260
380 A$="O. IZQUIERDA":GOSUB 260
390 A$="P. DERECHA":GOSUB 260
400 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 260
410 IF INKEY(60)<>0 THEN GOTO 410
420 INK 0,22:INK 1,0:INK 2,8:INK 3,9
430 PAPER 0:BORDER 22:PEN 1
440 MODE 1
450 GOSUB 1150
460 GOSUB 1090
470 GOSUB 780
480 GOSUB 1010
490 P=0:GOSUB 1070
500 H=10:I=10
510 HB=10:IB=10
520 IF INKEY(67)=0 THEN H=H-1
530 IF INKEY(69)=0 THEN H=H+1
540 IF INKEY(34)=0 THEN I=I-1
550 IF INKEY(27)=0 THEN I=I+1
560 LOCATE I,H:CALL 30000:C=PEEK(29999)
570 PEN 1
580 LOCATE IB,HB:PRINT " "
590 LOCATE I,H:PRINT CHR$(161)
600 SOUND 1,2000,1,8
610 IB=I:HB=H
620 IF C>161 THEN GOTO 650
630 IF C=160 THEN FOR A=1 TO 200 STEP 20:SOUND 1,A,1:NEXT A:P=P+15:GOSUB 1070:GO
SUB 930
640 GOTO 520
650 REM *** MUERTE ***
660 INK 0,6,12:BORDER 6,12
670 FOR A=1 TO 1000 STEP 3
680 SOUND 1,A,1
690 NEXT A
700 INK 0,22:BORDER 22
710 MODE 0
720 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
730 PEN 1
740 LOCATE 4,13:PRINT"PUNTOS:";USING "######";P
750 INK 2,22,1
760 FOR A=1 TO 10000:NEXT A
770 RUN 240
780 MODE 1
790 WINDOW #1,1,40,1,3
```

```
800 PAPER #1,3:CLS #1
810 WINDOW 1,40,4,25
820 PEN 3
830 A$=CHR$(166)+CHR$(166)
840 B$=""
850 FOR A=1 TO 20
860 B$=B$+A$
870 NEXT A
880 PRINT B$;B$;
890 FOR A=1 TO 17:PRINT A$;TAB(39);A$;:NEXT A
900 PRINT B$;B$;
910 RETURN
920 REM *** MOSQUITO GRANDE ***
930 X=3+INT(RND*16):Y=2+INT(RND*35)
940 PEN 2
950 LOCATE Y,X:CALL 30000:C=PEEK(29999):IF C<>32 THEN GOTO 930
960 LOCATE Y+1,X:CALL 30000:C=PEEK(29999):IF C<>32 THEN GOTO 930
970 LOCATE Y+1,X+1:CALL 30000:C=PEEK(29999):IF C<>32 THEN GOTO 930
980 LOCATE Y,X+1:CALL 30000:C=PEEK(29999):IF C<>32 THEN GOTO 930
990 LOCATE Y,X:PRINT CHR$(162)+CHR$(163)
1000 LOCATE Y,X+1:PRINT CHR$(164)+CHR$(165)
1010 X=3+INT(RND*17):Y=2+INT(RND*36)
1020 LOCATE Y,X:CALL 30000:C=PEEK(29999)
1030 IF C<>32 THEN GOTO 1010
1040 SOUND 1,300,1
1050 PEN 2:PRINT CHR$(160)
1060 RETURN
1070 LOCATE #1,10,2:PRINT#1,"PUNTUACION:";USING "######";P
1080 RETURN
1090 REM ** CODE SCREEN$ **
1100 DATA 205,96,187,50,47,117,201
1110 RESTORE 1100
1120 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
1130 RETURN
1140 REM *****************
1150 SYMBOL AFTER 160
1160 SYMBOL 160,80,168,156,223,120,36,68,130
1170 SYMBOL 161,24,24,8,227,199,16,24,24
1180 SYMBOL 162,52,74,74,133,130,131,227,63
1190 SYMBOL 163,0,0,0,48,248,255,248,192
1200 SYMBOL 164,15,20,20,44,216,16,96,0
1210 SYMBOL 165,128,192,160,176,64,48,0,0
1220 SYMBOL 166,182,109,219,182,109,219,182,109
1230 RETURN
```

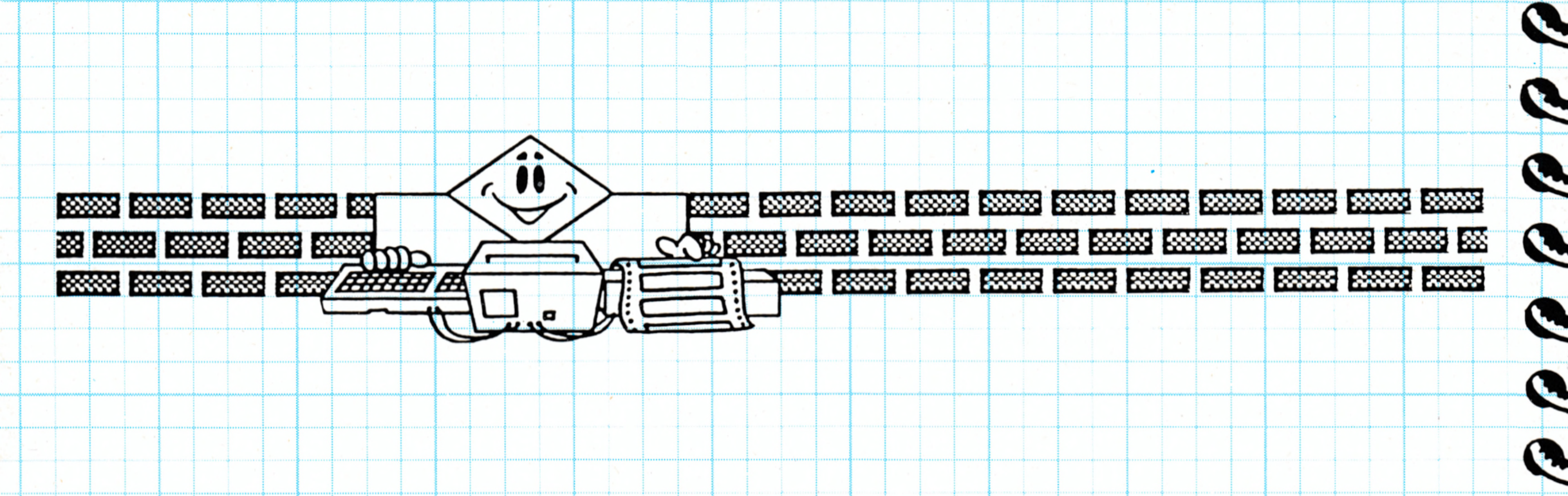




BATERIAS

```
1 GOSUB 3000
10 MODE 1
20 INK 0,26:INK 1,0:INK 2,20:INK 3,8
30 WINDOW#1,1,8,1,8:WINDOW 1,40,9,25:WINDOW#2,10,40,1,8
40 PAPER#1,2:CLS#1:PEN#1,1
50 BORDER 26
52 GOSUB 2500
55 DIM A$(8,8):DIM G(8)
56 GOSUB 2000
60 FOR A=1 TO 8:FOR B=1 TO 8:LET A$(A,B)="0":NEXT B
70 NEXT A
80 X=1:Y=1
90 LOCATE#1,Y,X
100 IF A$(X,Y)="0" THEN PRINT#1," ";
105 IF A$(X,Y)="1" THEN PRINT#1,CHR$(143);
110 IF INKEY(8)=0 THEN Y=Y-1:IF Y<1 THEN Y=1
115 IF INKEY(1)=0 THEN Y=Y+1:IF Y>8 THEN Y=8
120 IF INKEY(0)=0 THEN X=X-1:IF X<1 THEN X=1
125 IF INKEY(2)=0 THEN X=X+1:IF X>8 THEN X=8
130 IF INKEY(18)=0 THEN A$(X,Y)="1"
140 IF INKEY(79)=0 THEN A$(X,Y)="0"
150 LOCATE#1,Y,X
160 IF A$(X,Y)="1" THEN PRINT#1,CHR$(233);
165 IF A$(X,Y)="0" THEN PRINT#1,CHR$(232);
200 T$=INKEY$
210 IF INKEY(61)=0 THEN GOSUB 1000
220 IF INKEY(35)=0 THEN GOSUB 1500
230 IF INKEY(62)=0 THEN CLS#1:GOTO 60
240 IF INKEY(27)=0 THEN GOSUB 1600
250 IF INKEY(63)=0 THEN GOSUB 1800
260 IF INKEY(58)=0 THEN GOSUB 1900
270 IF INKEY(71)=0 THEN GOSUB 2500
280 IF INKEY(55)=0 THEN GOSUB 1950
490 FOR Z=1 TO 60:NEXT Z
500 GOTO 90
1000 CLS#2:PRINT#2,"*** DATAS ***":PRINT#2:INPUT#2,"SYMBOL INICIAL:";SI:INPUT#2,
"SYMBOL FINAL:";SF
1010 PEN 1:MODE 2
1015 L=9000+(2*(SI-32))
1018 SYMBOL AFTER 255
1020 FOR N=SI TO SF
```

```
1030 PRINT L+(5*(N-SI));"SYMBOL";N;CHR$(8);",";
1040 p=40700+(N*8)
1050 FOR b=p TO P+7:z$=STR$(PEEK(b))
1060 PRINT MID$(z$,2,LEN(z$)-1);",";
1070 NEXT b:PRINT CHR$(8);" "
1080 NEXT n
1100 END
1500 CLS#2:PRINT#2,"*** INTRODUCIR ***":PRINT#2:INPUT#2,"EN QUE CARACTER (32-255
):";C
1505 PRINT#2,"CAMBIAMOS: ";CHR$(C)
1510 FOR A=1 TO 8:D$="":FOR Z=1 TO 8:D$=D$+A$(A,Z):NEXT Z:NU=VAL("&X"+D$)
1515 G(A)=NU
1520 POKE 40699+(C*8)+A,NU:NEXT A
1525 SYMBOL C,G(1),G(2),G(3),G(4),G(5),G(6),G(7),G(8)
1528 GOSUB 2130
1530 PRINT#2,"OK. INTRODUCIDO";C;": ";CHR$(C)
1540 RETURN
1600 CLS#2:PRINT#2,"*** ELEGIR ***":PRINT#2:INPUT#2,"QUE CARACTER (32-255):";C
1610 P=40700+(C*8):FOR Z=P TO P+7
1620 Z$=BIN$(PEEK(Z),8):FOR N=1 TO 8:A$(Z-P+1,N)=MID$(Z$,N,1):NEXT N
1630 NEXT Z
1640 GOSUB 1700
1650 PRINT#2,"OK, ";CHR$(C);" EN PANTALLA."
1660 RETURN
1700 FOR K=1 TO 8:FOR L=1 TO 8
1710 LOCATE#1,L,K
1720 IF A$(K,L)="0" THEN PRINT#1,CHR$(32);
1730 IF A$(K,L)="1" THEN PRINT#1,CHR$(143);
1740 NEXT L:NEXT K:RETURN
1800 INPUT#2,"CARACTER INICIAL:";C
1810 CLS#2
1820 PRINT#2,CHR$(C);CHR$(C+1):PRINT#2,CHR$(C+2);CHR$(C+3)
1830 RETURN
1900 FOR K=1 TO 8:FOR L=1 TO 4
1910 Z$=A$(K,L):A$(K,L)=A$(K,9-L):A$(K,9-L)=Z$
1920 NEXT L:NEXT K
1930 GOSUB 1700:RETURN
1950 FOR K=1 TO 8:FOR L=1 TO 8
1960 IF A$(K,L)="0" THEN A$(K,L)="1" ELSE A$(K,L)="0"
1980 NEXT L:NEXT K:GOSUB 1700:RETURN
2000 H$="":FOR A=32 TO 71:H$=H$+CHR$(A):NEXT A
2010 I$="":FOR A=72 TO 111:I$=I$+CHR$(A):NEXT A
2020 J$="":FOR A=112 TO 151:J$=J$+CHR$(A):NEXT A
2030 K$="":FOR A=152 TO 191:K$=K$+CHR$(A):NEXT A
2040 L$="":FOR A=192 TO 231:L$=L$+CHR$(A):NEXT A
2050 M$="":FOR A=232 TO 255:M$=M$+CHR$(A):NEXT A
2060 CLS:PRINT:FOR A=32 TO 255 STEP 40:PEN 2:PRINT A:PRINT:NEXT A
2120 SYMBOL AFTER 32
2130 PEN 1:LOCATE 1,3:PRINT H$:PRINT I$:PRINT J$:PRINT K$:PRINT L$:PRINT M$
2190 PEN 1
2200 RETURN
2500 CLS#2:PRINT#2,"<<< GENERADOR DE CARACTERES >>>":PRINT
2510 PRINT#2,"MOVIMIENTO CON TECLAS CURSOR"
2515 PRINT#2,"ENTER. ENCIENDE  DEL. APAGA"
2520 PRINT#2,"I. INTRODUCIR  P. ELEGIR"
2530 PRINT#2,"C. BORRA CELDILLA"
2540 PRINT#2,"E. ESPEJO  V. INVERTIR"
2550 PRINT#2,"D. DATAS   Z. PONE ESTA PAGINA";
2560 SOUND 1,200,10
2600 RETURN
3000 MODE 0:PRINT"GENERADOR:"
3010 PRINT:PRINT"ANGEL GARCIA DELGADO":PRINT"G.T.S. 1986"
3020 FOR A=1 TO 1000 STEP 5:SOUND 1,A,1,15:NEXT A:RETURN
```

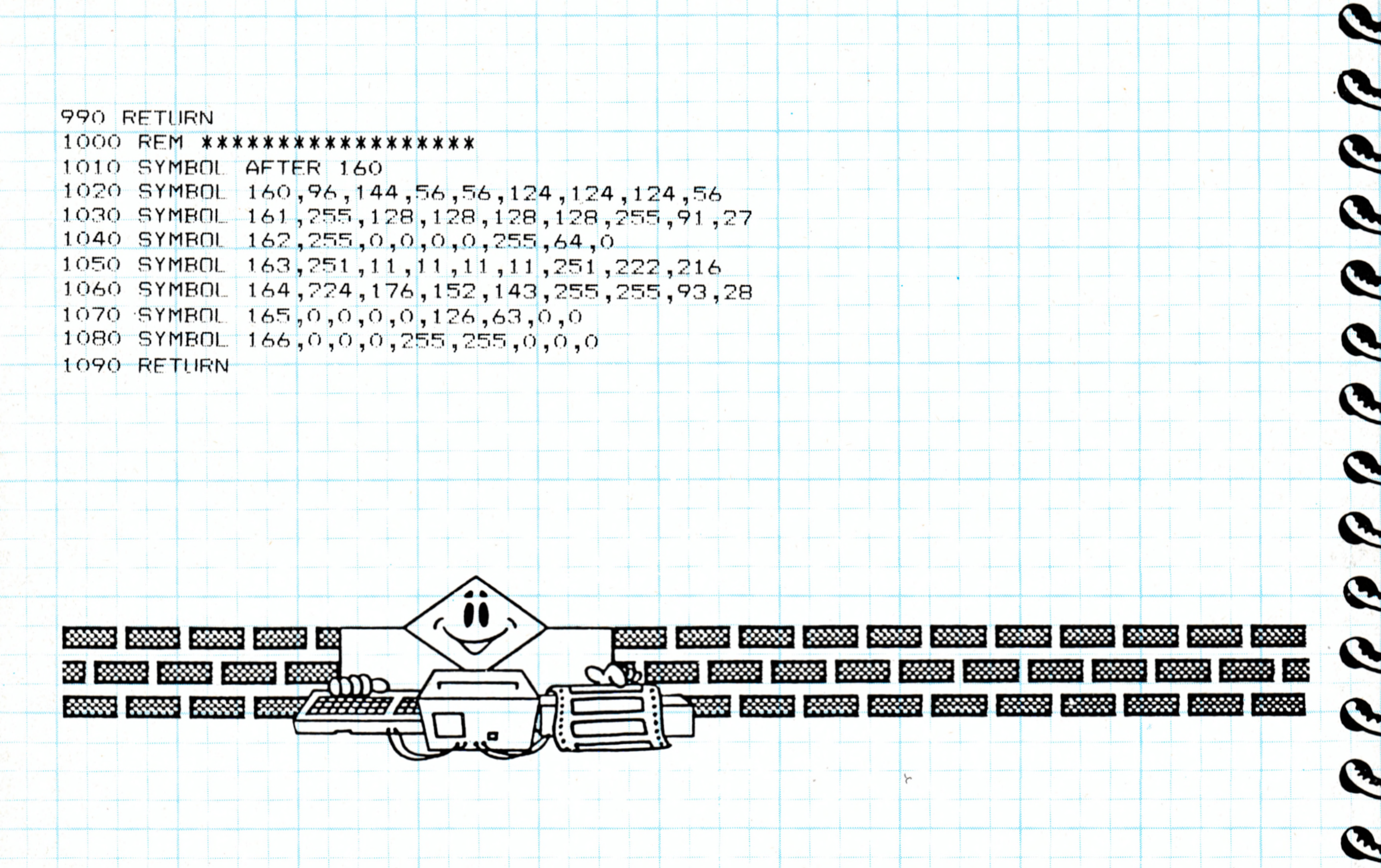


RECOGIDA

```
10 REM ******* RECOGIDA *******
20 REM * ANGEL GARCIA DELGADO *
30 REM ******** G.T.S. ********
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 7,12
160 PRINT "RECOGIDA"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<<< RECOGIDA >>>":GOSUB 270
330 PRINT:A$="RECOGE LAS PERAS DEL HUERTO PARA":GOSUB 270
340 A$="CARGARLAS EN EL CAMION, ANTES DE QUE":GOSUB 270
350 A$="ESTE SE MARCHE.":GOSUB 270
360 PRINT:A$="CONTROLES DEL JUEGO:":GOSUB 270
370 A$="Q. ARRIBA":GOSUB 270
380 A$="A. ABAJO":GOSUB 270
390 A$="O. IZQUIERDA":GOSUB 270
400 A$="P. DERECHA":GOSUB 270
```

```
410 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
420 IF INKEY(60)<>0 THEN GOTO 420
430 P=0:T=250:F=1
440 MODE 1
450 INK 0,0:INK 1,26:INK 2,9:INK 3,24
460 BORDER 0:PAPER 0
470 PEN 1
480 WINDOW 1,40,7,25
490 GOSUB 950:GOSUB 1010
500 PRINT #1,"    PUNTOS:";TAB(20);"    TIEMPO:"
510 A$="":B$=""
520 FOR A=1 TO 40
530 A$=A$+CHR$(166):B$=B$+CHR$(165)
540 NEXT A
550 PRINT #1,A$:PRINT #1,B$;"   ";CHR$(161);CHR$(162);CHR$(163);CHR$(164):PRINT #
1,A$
560 CLS:GOSUB 870
570 PEN 3
580 T=300
590 X=5:Y=5:XB=5:YB=5:R=0
600 IF INKEY(67)=0 THEN X=X-1:IF X<1 THEN X=1
610 IF INKEY(69)=0 THEN X=X+1:IF X>18 THEN X=18
620 IF INKEY(34)=0 THEN Y=Y-1:IF Y<1 THEN Y=1
630 IF INKEY(27)=0 THEN Y=Y+1:IF Y>40 THEN Y=40
640 LOCATE YB,XB:PRINT" "
650 LOCATE Y,X:CALL 30000:C=PEEK(29999)
660 IF C=160 THEN R=R+1:SOUND 1,500,3:P=P+5:LOCATE #1,11,1:PRINT#1,P
670 IF R>9+5*F THEN R=0:F=F+1:P=P+T:FOR A=1 TO 1000 STEP 3:SOUND 1,A,1:NEXT A:GO
TO 560
680 PRINT CHR$(248+RND*3)
690 T=T-1:LOCATE #1,31,1:PRINT#1,USING "###";T
700 IF T<1 THEN GOTO 730
710 XB=X:YB=Y
720 GOTO 600
730 B$="  "+CHR$(161)+CHR$(162)+CHR$(163)+CHR$(164)
740 FOR A=3 TO 36
750 LOCATE #1,A,5:PRINT #1,B$
760 SOUND 1,1000,1:FOR B=1 TO 50:NEXT B
770 NEXT A
780 MODE 0
790 PEN 2
800 LOCATE 6,7:PRINT"GAME OVER"
810 PEN 1
820 LOCATE 5,12:PRINT"PUNTOS:";USING "####";P
830 INK 2,11,0
840 FOR A=1 TO 4000 STEP 10:SOUND 1,A,1:NEXT A
850 FOR A=1 TO 10000:NEXT A
860 RUN 250
870 FOR A=1 TO 10+5*F
880 X=1+INT(17*RND):Y=1+INT(RND*39)
890 LOCATE Y,X:CALL 30000:IF PEEK(29999)<>32 THEN GOTO 880
900 PEN 2:PRINT CHR$(160)
910 PRINT CHR$(7);
920 NEXT A
930 RETURN
940 END
950 REM ** CODE SCREEN$ **
960 DATA 205,96,187,50,47,117,201
970 RESTORE 960
980 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
```

```
990 RETURN
1000 REM ******************
1010 SYMBOL AFTER 160
1020 SYMBOL 160,96,144,56,56,124,124,124,56
1030 SYMBOL 161,255,128,128,128,128,255,91,27
1040 SYMBOL 162,255,0,0,0,0,255,64,0
1050 SYMBOL 163,251,11,11,11,11,251,222,216
1060 SYMBOL 164,224,176,152,143,255,255,93,28
1070 SYMBOL 165,0,0,0,0,126,63,0,0
1080 SYMBOL 166,0,0,0,255,255,0,0,0
1090 RETURN
```

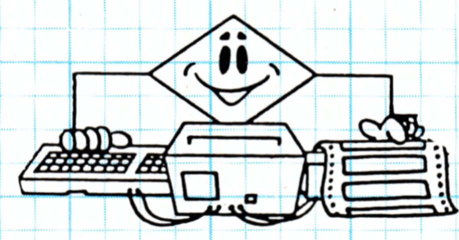


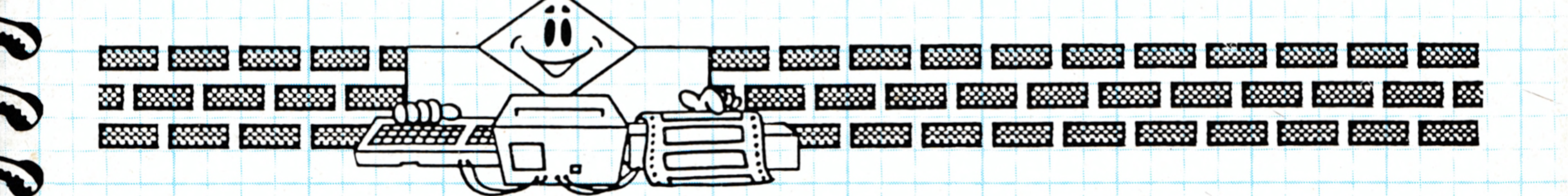
ENSAMBLAJE

```
10 REM ****** EMSAMBLAJE ******
20 REM * ANGEL GARCIA DELGADO *
30 REM ********* G.T.S. *******
40 REM
42 GOSUB 1110:GOSUB 1170
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 6,12
160 PRINT "EMSAMBLAJE"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
```

```
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<<< ENSAMBLAJE >>>":GOSUB 270
330 PRINT:PRINT:A$="ENSAMBLA TU MODULO LUNAR CON LA NAVE":GOSUB 270
340 A$="NODRIZA PERO SIN ESTRELLARTE CONTRA LOS":GOSUB 270
350 A$="ASTEROIDES, O CONTRA EL SUELO DE LA LUNA":GOSUB 270
360 PRINT:A$="LOS CONTROLES DE LA NAVE SON:":GOSUB 270
370 A$="CURSOR <. MUEVE A LA IZQUIERDA":GOSUB 270
380 A$="CURSOR >. MUEVE A LA DERECHA":GOSUB 270
390 A$="CURSOR "+CHR$(196)+". ACTIVA RETROPROPULSORES":GOSUB 270
400 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
410 IF INKEY(60)<>0 THEN GOTO 410
420 S$="":FOR A=1 TO 40:S$=S$+CHR$(164):NEXT A
430 INK 0,0:INK 1,26:INK 2,10:INK 3,3
440 PAPER 0:BORDER 0
450 PEN 1
460 MODE 1
470 P=0:V=5:F=1
480 WINDOW 1,40,2,25
490 GOSUB 930
500 X=1:Y=1+INT(RND*39)
510 XB=X:YB=Y
520 LOCATE Y,X:PEN 2:PRINT CHR$(160)
530 FOR A=1 TO 50:A$=INKEY$:NEXT A
540 A$=INKEY$:IF A$="" THEN GOTO 540
550 IF INKEY(8)=0 THEN Y=Y-1:IF Y<1 THEN Y=1
560 IF INKEY(1)=0 THEN Y=Y+1:IF Y>40 THEN Y=40
570 IF INKEY(0)<>0 THEN X=X+1:GOTO 600
580 SOUND 1,1000,1,15,0,0,31
590 X=X-1:IF X<1 THEN X=1
600 LOCATE Y,X:CALL 30000:C=PEEK(29999)
610 IF C=32 THEN GOTO 680
620 IF C=161 THEN 710
630 IF C=162 THEN 710
640 IF C=163 THEN 710
650 IF C=166 THEN 710
660 IF C=164 THEN 710
670 IF C=46 THEN GOTO 760
680 LOCATE YB,XB:PRINT" ":LOCATE Y,X:PRINT CHR$(160)
690 XB=X:YB=Y
700 GOTO 550
710 REM *** MUERTE ***
720 LOCATE YB,XB:PRINT" ":PEN 1:LOCATE Y,X:PRINT CHR$(238)
730 FOR A=1 TO 1000 STEP 5:SOUND 1,A,1,15,0,0,31:NEXT A
740 V=V-1:GOSUB 1070
750 GOTO 490
760 LOCATE YB,XB:PRINT" ":LOCATE Y,X:PRINT CHR$(160)
770 FOR A=1 TO 1000 STEP 5:SOUND 1,A,1:NEXT A
780 F=F+1
790 P=P+15*F
800 GOTO 490
```

```
810 REM *** GAME OVER ***
820 FOR B=15 TO 200 STEP 2
830 FOR A=1 TO 500 STEP B
840 SOUND 1,A,1
850 NEXT A:NEXT B
860 MODE 0
870 LOCATE 6,8:PEN 2:PRINT"GAME OVER"
880 PEN 1
890 LOCATE 5,12:PRINT"PUNTOS:";USING "#####";P
900 INK 2,16,0
910 FOR A=1 TO 10000:NEXT A
920 RUN 250
930 REM *** ASTEROIDES ***
940 GOSUB 1070:CLS
950 PEN 3
960 FOR A=1 TO 10+F*5
970 X=1+INT(RND*21):Y=1+INT(RND*39)
980 LOCATE Y,X:CALL 30000:IF PEEK(29999)<>32 THEN GOTO 970
990 PRINT CHR$(166)
1000 NEXT A
1010 PEN 1:LOCATE 1,24:PRINT S$;
1020 PEN 2
1030 Y=1+INT(RND*36)
1040 LOCATE Y,23:PRINT CHR$(161)+CHR$(162)+CHR$(163)
1050 LOCATE Y,22:PEN 1:PRINT" ."
1060 RETURN
1070 LOCATE #1,1,1:PRINT#1,"PUNTOS: ";USING "####";P;:PRINT#1,"     VIDAS: ";V;"
   FASE: ";:PRINT #1,USING "##";F
1080 IF V<1 THEN GOTO 810
1090 RETURN
1100 END
1110 REM ** CODE SCREEN$ **
1120 DATA 205,96,187,50,47,117,201
1130 RESTORE 1120
1140 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
1150 RETURN
1160 REM *****************
1170 SYMBOL AFTER 160
1180 SYMBOL 160,24,44,94,191,191,255,255,60
1190 SYMBOL 161,6,15,11,11,11,11,11,6
1200 SYMBOL 162,60,36,102,231,231,165,60,0
1210 SYMBOL 163,96,240,208,208,208,208,208,96
1220 SYMBOL 164,123,255,255,241,255,223,255,255
1230 SYMBOL 165,24,60,60,24,24,16,32,0
1240 SYMBOL 166,56,122,247,255,223,122,126,28
1250 RETURN
```



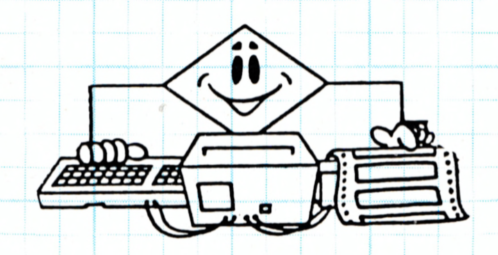


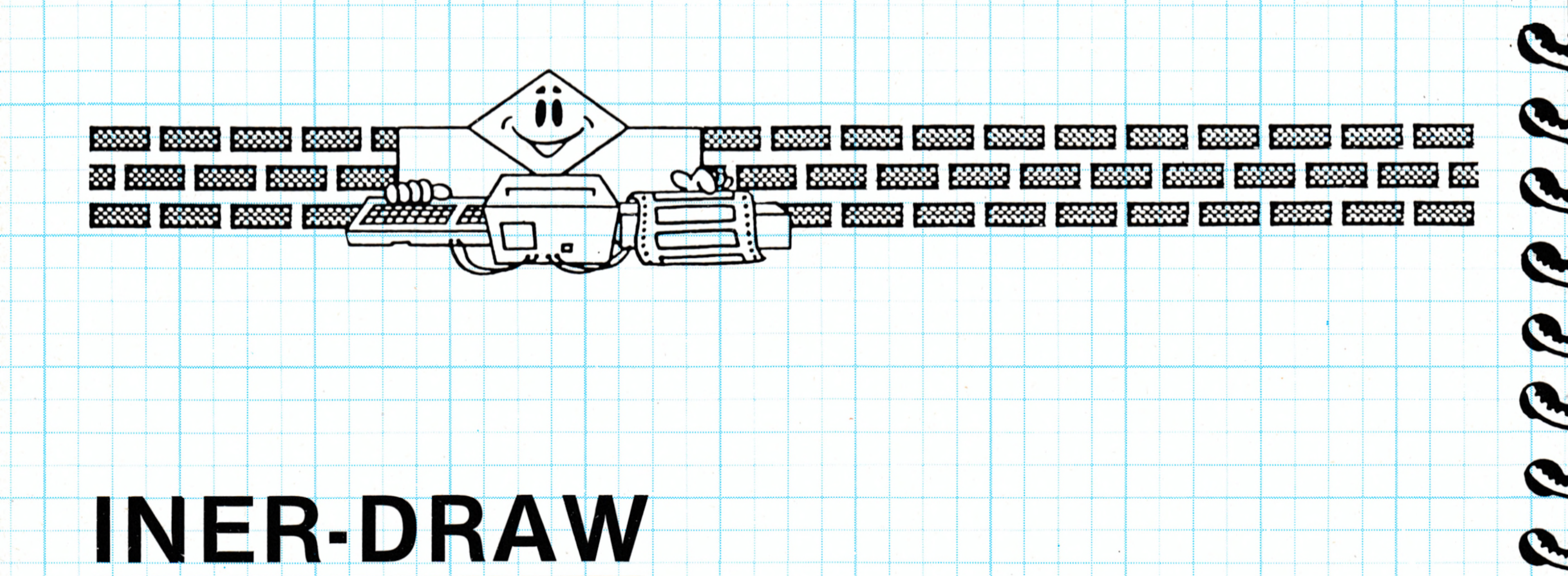
ANTIRROBOT

```
10 REM ****** ANTIRROBOT ******
20 REM * ANGEL GARCIA DELGADO *
30 REM ******** G.T.S. ********
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 6,12
160 PRINT "ANTIRROBOT"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<<< ANTIRROBOT >>>":GOSUB 270
330 PRINT:A$="CONDUCE TU ROBOT A LA ZONA MARCADA":GOSUB 270
340 A$="CON UNA -H- PARPADEANTE, PERO":GOSUB 270
350 A$="TENIENDO SUMO CUIDADO DE NO PISAR":GOSUB 270
360 A$="LAS MINAS QUE APARECEN EN EL CAMINO":GOSUB 270
370 PRINT:A$="Q. ARRIBA":GOSUB 270
380 A$="A. ABAJO":GOSUB 270
390 A$="O. IZQUIERDA":GOSUB 270
400 A$="P. DERECHA":GOSUB 270
```

```
410 PRINT:PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
420 IF INKEY(60)<>0 THEN GOTO 420
430 INK 0,0:INK 1,24:INK 2,23:INK 3,6,17
440 PAPER 0:BORDER 0:PEN 1
450 GOSUB 1110
460 GOSUB 1170
470 MODE 1
480 WINDOW #1,20,35,1,3:PAPER #1,1:CLS #1
490 PEN#1,2
500 PRINT#1,"************************************************";
510 f=1:p=0
520 GOSUB 1040
530 LOCATE 1,1:PEN 3
540 PRINT CHR$(165)+CHR$(166)
550 LOCATE 1,2
560 PRINT CHR$(167);CHR$(168)
570 p$=CHR$(160)+CHR$(161)+CHR$(10)+CHR$(8)+CHR$(8)+CHR$(162)+CHR$(163)
580 b$="  "+CHR$(10)+CHR$(8)+CHR$(8)+"  "
590 x=23:y=39
600 xb=23:yb=39
610 M=0
620 IF INKEY(67)=0 THEN x=x-1:IF x<1 THEN x=1
630 IF INKEY(69)=0 THEN x=x+1:IF x>23 THEN x=23
640 IF INKEY(34)=0 THEN y=y-1:IF y<1 THEN y=1
650 IF INKEY(27)=0 THEN y=y+1:IF y>39 THEN y=39
660 LOCATE y,x:GOSUB 780
670 LOCATE y+1,x:GOSUB 780
680 LOCATE y,x+1:GOSUB 780
690 LOCATE y+1,x+1:GOSUB 780
700 PEN 2
710 LOCATE yb,xb:PRINT b$
720 IF M>10-F THEN GOSUB 1060:M=0
730 LOCATE y,x:PRINT p$
740 M=M+1
750 SOUND 3,25+25*RND,1
760 xb=x:yb=y
770 GOTO 620
780 CALL 30000:c=PEEK(29999)
790 IF c=32 THEN RETURN
800 IF c=164 THEN GOTO 840
810 IF C=42 THEN GOTO 840
820 IF C>164 THEN GOTO 970
830 RETURN
840 REM *** MUERTO ***
850 INK 0,3,12:BORDER 3,12
860 FOR A=1 TO 1000 STEP 3:SOUND 1,A,1:NEXT A
870 INK 0,0
880 BORDER 0
890 MODE 0
900 PEN 2
910 LOCATE 6,7:PRINT"GAME OVER"
920 PEN 1
930 LOCATE 4,13:PRINT"PUNTOS:";USING "######";P
940 INK 2,25,0
950 FOR A=1 TO 10000:NEXT A
960 RUN 250
970 REM *** H... OTRA FASE ***
980 LOCATE YB,XB:PRINT B$:LOCATE 1,1:PEN 3:PRINT P$
990 FOR A=20 TO 30:FOR B=100 TO 500 STEP A:SOUND 2,B,1:NEXT B:NEXT A
1000 P=P+15*F
```

```
1010 GOSUB 1040
1020 F=F+1
1030 GOTO 530
1040 PEN #1,0:PEN 1:LOCATE #1,2,2:PRINT#1,"PUNTOS: ";USING "######";P
1050 RETURN
1060 H=4+INT(20*RND):I=1+INT(RND*39)
1070 PEN 1:LOCATE I,H:PRINT CHR$(164)
1080 SOUND 1,100,1
1090 RETURN
1100 END
1110 REM ** CODE SCREEN$ **
1120 DATA 205,96,187,50,47,117,201
1130 RESTORE 1120
1140 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
1150 RETURN
1160 REM ******************
1170 SYMBOL AFTER 160
1180 SYMBOL 160,96,48,31,63,127,247,227,231
1190 SYMBOL 161,6,12,248,252,254,239,199,231
1200 SYMBOL 162,255,248,124,63,63,202,219,27
1210 SYMBOL 163,255,31,62,252,252,83,219,216
1220 SYMBOL 164,60,66,167,155,155,167,126,60
1230 SYMBOL 165,255,255,255,227,227,227,227,224
1240 SYMBOL 166,255,255,255,199,199,199,199,7
1250 SYMBOL 167,224,227,227,227,227,255,255,255
1260 SYMBOL 168,7,199,199,199,199,255,255,255
1270 RETURN
```

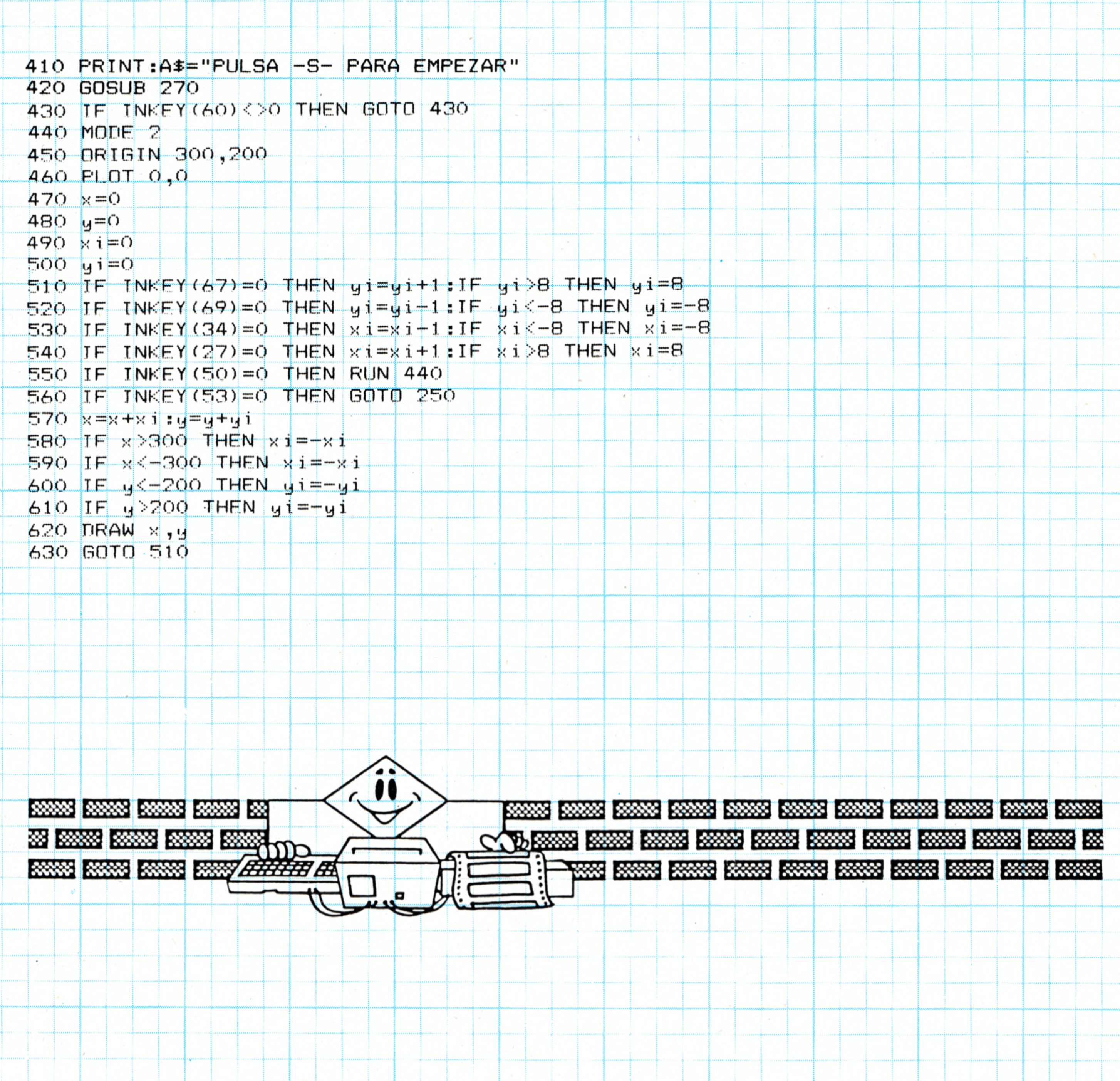




INER-DRAW

```
10 REM **** INER-DRAW ****
20 REM * ANGEL GARCIA D. *
30 REM ****** G.T.S. *****
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 6,12
160 PRINT "INER-DRAW"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 a$="<<< INER-DRAW )))":GOSUB 270
330 PRINT:A$="DIBUJA DE UNA FORMA MUY ESPECIAL:":GOSUB 270
340 A$="!!! CON INERCIA !!!":GOSUB 270
350 A$="VERAS QUE RESULTADOS CONSIGUES":GOSUB 270
360 PRINT:A$="SI SUELTAS LAS TECLAS LOS REBOTES":GOSUB 270
370 A$="DEL CURSOR DIBUJARAN UN ENTRAMADO.":GOSUB 270
380 PRINT:A$="Q.A.O.P. MUEVEN EL CURSOR":GOSUB 270
390 A$="R. BORRA LA PANTALLA":GOSUB 270
400 A$="F. FINALIZAR":GOSUB 270
```

```
410 PRINT:A$="PULSA -S- PARA EMPEZAR"
420 GOSUB 270
430 IF INKEY(60)<>0 THEN GOTO 430
440 MODE 2
450 ORIGIN 300,200
460 PLOT 0,0
470 x=0
480 y=0
490 xi=0
500 yi=0
510 IF INKEY(67)=0 THEN yi=yi+1:IF yi>8 THEN yi=8
520 IF INKEY(69)=0 THEN yi=yi-1:IF yi<-8 THEN yi=-8
530 IF INKEY(34)=0 THEN xi=xi-1:IF xi<-8 THEN xi=-8
540 IF INKEY(27)=0 THEN xi=xi+1:IF xi>8 THEN xi=8
550 IF INKEY(50)=0 THEN RUN 440
560 IF INKEY(53)=0 THEN GOTO 250
570 x=x+xi:y=y+yi
580 IF x>300 THEN xi=-xi
590 IF x<-300 THEN xi=-xi
600 IF y<-200 THEN yi=-yi
610 IF y>200 THEN yi=-yi
620 DRAW x,y
630 GOTO 510
```

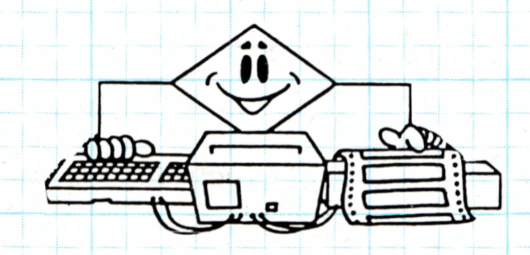


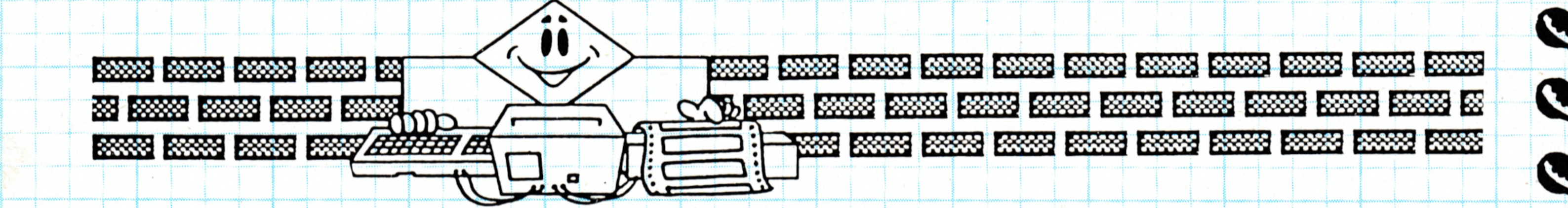
HUESOS

```
10 REM **    HUESOS       **
20 REM *                   *
30 REM ** ANGEL GARCIA **
40 REM *                   *
50 REM **    G. T. S.     **
60 REM
70 INK 0,0:INK 1,26:INK 2,8
80 BORDER 0:PAPER 0:PEN 1
```

```
90 MODE 0
100 ORIGIN 310,200
110 FOR A=0 TO 2*PI STEP PI/50
120 PLOT 0,0,2:DRAW SIN(A)*(150+RND*180),COS(A)*(80+RND*160)
130 NEXT A
140 PRINT CHR$(22);CHR$(1)
150 SPEED INK 30,30
160 LOCATE 8,13:PEN 1:PRINT "HUESOS"
170 INK 2,8,0
180 RESTORE 1020
190 READ A,B:IF A=-1 THEN GOTO 180
200 F=440*(2^(B/12)):T=ROUND(12500/F)
210 SOUND 1,T*5,A*10,15
220 SOUND 2,T*3,A*10,15
230 IF INKEY$<>"" THEN 250
240 GOTO 190
250 REM *** MENU ***
260 MODE 1
270 INK 3,11
280 INK 2,8
290 ORIGIN 0,0:DRAWR 600,0,1:DRAWR 0,399:DRAWR -600,0:DRAWR 0,-399
300 WINDOW 8,32,6,25
310 PRINT " ":PRINT" "
320 PEN 3:PRINT "**** ELIGE TU OPCION ****"
330 PRINT " "
340 PEN 1:PRINT "     1. CUESTIONARIO"
350 PRINT " "
360 PRINT "     2. LISTAR DATOS"
370 PRINT " "
380 PRINT "     3. TERMINAR"
390 PRINT " "
400 PRINT" "
410 PEN 3:PRINT"*************************"
420 IF INKEY(64)=0 THEN GOTO 460
430 IF INKEY(65)=0 THEN GOTO 880
440 IF INKEY(57)=0 THEN MODE 1:CALL 0
450 GOTO 420
460 REM **** CUESTIONARIO ****
470 MODE 1:INK 1,26:INK 2,20:INK 3,8
480 FOR P=1 TO 20
490 MODE 1:PEN 1:PRINT"******* HUESOS DEL CUERPO HUMANO *******"
500 N=INT (RND*3)
510 IF N=0 THEN RESTORE 960
520 IF N=1 THEN RESTORE 980
530 IF N=2 THEN RESTORE 1000
540 READ R$,NN:NN=INT(RND*NN):FOR Z=0 TO NN:READ I$:NEXT Z
550 PEN 3:PRINT" "
560 PRINT"PREGUNTA:";P;TAB(17);"HUESO: ";I$
570 PRINT " ":PEN 2
580 PRINT " "
590 PRINT "A QUE PARTE PARTE DEL CUERPO CORRESPONDE";:PRINT " ":PRINT"
  EL HUESO CITADO:"
600 PRINT" ":PRINT" "
610 PEN 3:PRINT "            (PULSA 1,2 o 3)"
620 PEN 1:PRINT " "
630 PRINT" ":PRINT "           1. CABEZA (Y CUELLO)"
640 PRINT" ":PRINT "           2. TRONCO (TORAX-ABDOMEN)"
650 PRINT" ":PRINT "           3. EXTREMIDADES"
660 SOUND 1,100,10
670 REM
```

```
680 IF INKEY(64)=0 THEN NR=0:GOTO 720
690 IF INKEY(65)=0 THEN NR=1:GOTO 720
700 IF INKEY(57)=0 THEN NR=2:GOTO 720
710 GOTO 670
720 PEN 2:PRINT " ":PRINT" ":IF NR=N THEN PRINT "!!!CORRECTO!!! LA RESPUESTA ES
";R$:FOR B=1 TO 3:FOR A=15 TO 0 STEP -1:INK 0,A:SOUN
D 1,A,1:NEXT A,B:AC=AC+1
730 IF NR<>N THEN PRINT "INCORRECTO. LA RESPUESTA ERA ";R$:SOUND 1,600,100:FOR A
=1 TO 100:PLOT RND*600,RND*400:NEXT A
740 NEXT P
750 MODE 0:FOR A=1 TO 15:INK A,27-A:NEXT A
760 PEN 5:PRINT "**** RESULTADOS ****"
770 PRINT" ":PRINT" "
780 PEN 2:PRINT "  ACIERTOS.....";AC
790 PRINT " "
800 PEN 3:PRINT "  FALLOS.......";20-AC
810 PRINT" ":PRINT" ":PRINT" "
820 PEN 1:PRINT"  PORCENTAJE:";AC*5;"%"
830 PRINT" ":PRINT" ":PRINT" "
840 PRINT "********************"
850 FOR A=0 TO 100:A$=INKEY$:SOUND 1,A,1,15:NEXT A
860 IF INKEY$=""THEN 860
870 GOTO 250
880 MODE 2:RESTORE 960
890 FOR A=1 TO 3
900 READ A$,N
910 PRINT "- ";A$;":":PRINT" "
920 FOR B=1 TO N:READ B$:PRINT "  ";B$,:NEXT B
930 PRINT" ":PRINT" ":PRINT " "
940 NEXT A
950 GOTO 850
960 DATA CABEZA,15
970 DATA PARIETAL,TEMPORAL,FRONTAL,OCCIPITAL,ETMOIDES,ESFENOIDES,MANDIBULA,NASAL
,UNGUIS,CORNETES,POMULOS,PALATINO,MAXILAR,VOMER,HIOI
DES
980 DATA TRONCO,10
990 DATA VERT. CERVICAL,VERT. LUMBAR,VERT. DORSAL,VERT. SACRA,VERT. COXIGEA,C. A
RTICULADAS,C. VERDADERAS,C. FALSAS,C. FLOTANTES,ESTE
RNON
1000 DATA EXTREMIDADES,22
1010 DATA CLAVICULA,OMOPLATO,HUMERO,CUBITO,RADIO,CARPO,ESCAFOIDES,SEMILUNAR,PIRA
MIDAL,PISIFORME,TRAPECIO,METACARPOS,FALANGES,ILEON,I
SQUION,PUBIS,FEMUR,TIBIA,PERONE,ASTRAGALO,CALCANEO,ESCAFOIDES
1020 DATA 8,4,4,5,4,7,4,7,4,5,4,4,4,2,4,0,4,0,4,2,4.4,8,4,2,2,8,2,8,4,4,5,4,7,4,
7,4,5,4,4,4,2,4,0,4,0,4,2,4,4,8,2,2,0,9,0
1030 DATA -1,-1
```



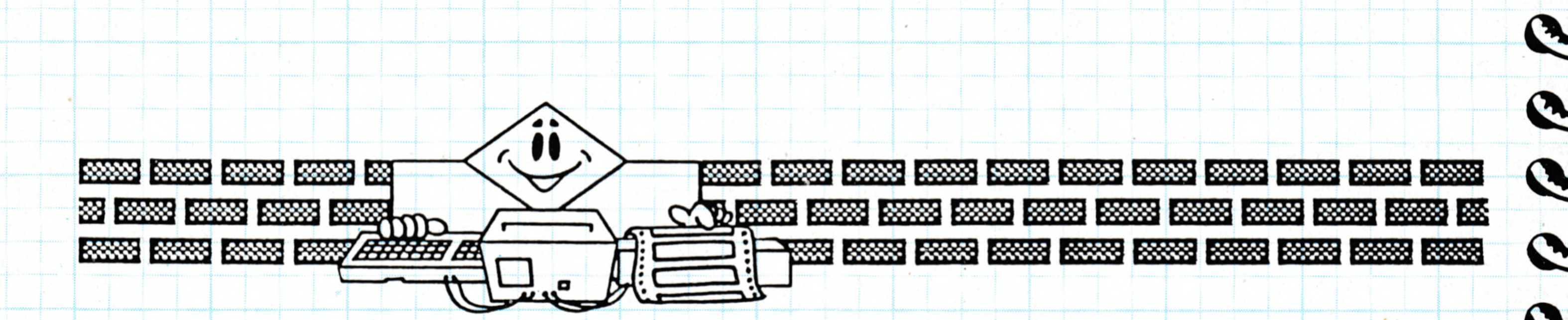


NUCLEO ENERGETICO

```
10 REM **** NUCLEO ENERGETICO ***
20 REM ** ANGEL GARCIA DELGADO **
30 REM
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 8,12
160 PRINT "NUCLEO"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<< NUCLEO ENERGETICO >>":GOSUB 270
330 PRINT:A$="DEFIENDE TU NUCLEO ENERGETICO":GOSUB 270
340 A$="DE LOS ATAQUES DE LOS ALIENIGENAS":GOSUB 270
350 A$="DEL PLANETA DRAKOV":GOSUB 270
360 PRINT:A$="LOS CONTROLES SON:":GOSUB 270
370 A$="Q. ARRIBA    A. ABAJO":GOSUB 270
380 A$="O. IZQUIERDA  P. DERECHA":GOSUB 270
390 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
400 IF INKEY(60)<>0 THEN 400
```

```
410 GOSUB 870
420 CO=24
430 DIM M(8,2)
440 MODE 1
450 ENT 1,10,1,1,10,-2,1
460 ENT 2,20,1,3
470 INK 1,26:INK 3,18:INK 2,CO,CO+3
480 B$="":FOR A=1 TO 6:B$=B$+CHR$(160):NEXT A
490 C$=B$+CHR$(160)+CHR$(160)
500 D$=C$+CHR$(160)+CHR$(160)
510 LOCATE 5,8
520 A$=B$:GOSUB 970:A$=C$:GOSUB 970:A$=D$:FOR A=1 TO 5:GOSUB 970:NEXT A
530 A$=C$:GOSUB 970:A$=B$:GOSUB 970
540 X=10:Y=5
550 XB=X:YB=1
560 FOR A=1 TO 8
570 GOSUB 980
580 NEXT A
590 A=1
600 PEN 3:GOSUB 740
610 A=A+1:IF A>8 THEN A=1
620 IF INKEY(67)=0 THEN X=X-1:IF X<1 THEN X=1
630 IF INKEY(69)=0 THEN X=X+1:IF X>25 THEN X=25
640 IF INKEY(34)=0 THEN Y=Y-1:IF Y<1 THEN Y=1
650 IF INKEY(27)=0 THEN Y=Y+1:IF Y>39 THEN Y=39
660 LOCATE Y,X:CALL 30000:C=PEEK(29999)
670 IF C=0 THEN X=XB:Y=YB
680 IF C=161 THEN GOSUB 840
690 PEN 1
700 LOCATE YB,XB:PRINT" ":LOCATE Y,X:PRINT CHR$(248+RND*3)
710 XB=X:YB=Y
720 SOUND 4,100,20,5+CO/3,0,1
730 GOTO 600
740 XM=M(A,1):YM=M(A,2):LOCATE YM,XM:PRINT" "
750 IF XM>12 THEN IF RND>0.5 THEN XM=XM-1
760 IF XM<12 THEN IF RND>0.5 THEN XM=XM+1
770 IF YM<20 THEN IF RND>0.5 THEN YM=YM+1
780 IF YM>20 THEN IF RND>0.5 THEN YM=YM-1
790 LOCATE YM,XM:CALL 30000:C=PEEK(29999)
800 IF C=0 THEN GOSUB 1040
810 PEN 3:LOCATE YM,XM:PRINT CHR$(161)
820 M(A,1)=XM:M(A,2)=YM
830 RETURN
840 FOR A=1 TO 8
850 IF M(A,1)=X THEN IF M(A,2)=Y THEN SOUND 1,200,25,15,0,2:GOSUB 980:P=P+5:RETU
RN
860 NEXT A:A=1:RETURN
870 REM ** CODE SCREEN$ **
880 DATA 205,96,187,50,47,117,201
890 RESTORE 880
900 FOR a=30000 TO 30006:READ b:POKE a,b:NEXT a
910 SYMBOL AFTER 160
920 SYMBOL 160,126,219,165,219,219,165,219,126
930 SYMBOL 161,255,153,189,255,129,255,66,231
940 SYMBOL 162,0,36,90,36,36,90,36,0
950 RETURN
960 REM ******************
970 PRINT TAB(20-LEN(A$)/2);:PAPER 3:PEN 2:PRINT A$:PAPER 0:PEN 1:RETURN
980 XX=1+INT(RND*24):YY=1+INT(RND*39)
990 LOCATE YY,XX:CALL 30000
```

```
1000 IF PEEK(29999)<>32 THEN GOTO 980
1010 M(A,1)=XX:M(A,2)=YY
1020 LOCATE YY,XX:PEN 3:PRINT CHR$(161)
1030 RETURN
1040 REM *** MUERTO ***
1050 XM=M(A,1):YM=M(A,2)
1060 FOR Z=1 TO 200 STEP 10:SOUND 2,Z,2,15,0,1:NEXT Z
1070 CO=CO-2:INK 2,CO,CO+3:IF CO<1 THEN GOTO 1090
1080 RETURN
1090 REM *** GAME OVER ***
1100 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
1110 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
1120 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
1130 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "######";P
1140 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
1150 FOR A=1 TO 50:A$=INKEY$:NEXT A
1160 PEN 1
1170 IF INKEY(60)=0 THEN RUN 250
1180 IF INKEY(46)=0 THEN CALL 0
1190 GOTO 1170
```

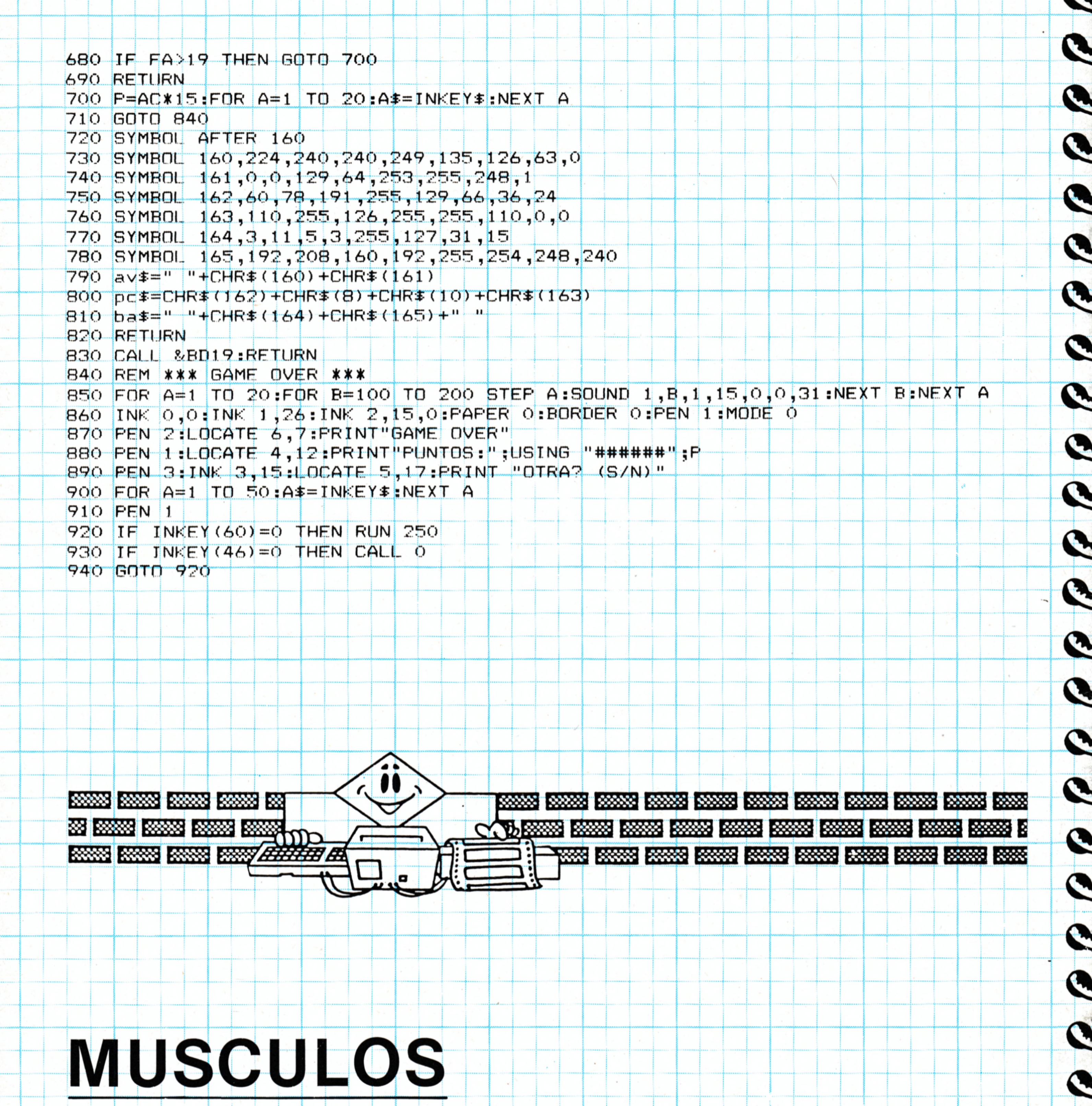


NAUFRAGO

```
10 REM *** NAUFRAGO ***
20 REM * ANGEL GARCIA *
30 REM **** G.T.S. ****
40 REM
50 MODE 0
60 INK 0,0:INK 1,26:INK 2,7:INK 3,18
70 PAPER 0:BORDER 0
80 ORIGIN 318,210
90 FOR a=0 TO 2*PI STEP PI/70
100 PLOT 0,0,2
110 DRAW 300*COS(a),150*SIN(a)
```

```
120 DRAWR 0,30*SIN(a),3
130 NEXT a
140 PRINT CHR$(22)+CHR$(1);
150 LOCATE 7,12
160 PRINT "NAUFRAGO"
170 PRINT CHR$(22)+CHR$(0);
180 INK 2,7,0:INK 3,0,18
190 FOR a=1 TO 300:SOUND 1,a,1,15:NEXT a
200 INK 2,18,7:INK 3,7,18
210 FOR a=300 TO 1 STEP -2:SOUND 1,a,1:SOUND 2,a*2,1:NEXT a
220 INK 2,7:INK 3,18
230 FOR a=1 TO 500:NEXT a
240 FOR a=0 TO 50:PRINT CHR$(7):FOR b=1 TO 50:NEXT b:NEXT a
250 MODE 1
260 GOTO 310
270 PRINT TAB(20-LEN(a$)/2):FOR a=1 TO LEN(a$)
280 b$=MID$(a$,a,1):PRINT b$;:IF b$<>" " THEN PRINT CHR$(7);
290 NEXT a
300 PRINT:PRINT:FOR a=1 TO 200:NEXT a:RETURN
310 REM *** INICIO DEL PROGRAMA ***
320 A$="<< NAUFRAGO >>":GOSUB 270
330 PRINT:A$="RECOGE LAS PROVISIONES QUE TE":GOSUB 270
340 A$="ENVIA EL AVION PARA QUE SOBREVIVAS":GOSUB 270
350 A$="AL NAUFRAGIO, HASTA QUE VENGA":GOSUB 270
360 A$="UN BARCO A RESCATARTE":GOSUB 270
370 PRINT:A$="CONTROLES DE TU BARCA:":GOSUB 270
380 A$="F1. MUEVE A LA IZQUIERDA":GOSUB 270
390 A$="F3. MUEVE A LA DERECHA":GOSUB 270
400 PRINT:A$="PULSA -S- PARA EMPEZAR":GOSUB 270
410 IF INKEY(60)<>0 THEN 410
420 ENT 1,10,1,1,10,-1,1
430 GOSUB 720
440 INK 0,23:PAPER 0:BORDER 23:INK 1,0:PEN 1:MODE 0
450 INK 2,4:INK 3,6:INK 4,14:INK 5,26
460 WINDOW #1,1,20,24,25:PEN #1,5:PAPER #1,4:WINDOW #2,1,20,19,25:PAPER #2,4:CLS
 #2
470 AC=0:FA=0:GOSUB 660
480 pa=1:xp=5:yp=5
490 y=8
500 xa=1+INT(RND*10):ya=0
510 IF INKEY(13)=0 THEN y=y-1:IF y<2 THEN y=2
520 IF INKEY(5)=0 THEN y=y+1:IF y>18 THEN y=18
530 EVERY 50 GOSUB 830
540 LOCATE y-1,18:PEN 3:PRINT ba$
550 ya=ya+1:IF ya>17 THEN LOCATE ya,xa:PRINT "   ":xa=1+INT(RND*10):ya=1
560 LOCATE ya,xa:PEN 1:PRINT av$
570 SOUND 1,800,10,10,0,1,31
580 ON pa GOSUB 600,620
590 GOTO 510
600 IF RND>0.95 THEN pa=2:xp=xa+1:yp=ya+2:SOUND 2,100,10,15
610 RETURN
620 LOCATE yp,xp:PRINT" ":xp=xp+1:LOCATE yp,xp:PEN 2:PRINT pc$
630 IF xp>16 THEN LOCATE yp,xp:PRINT" ":LOCATE yp,xp+1:PRINT" ":pa=1:fa=fa+1:SOU
ND 2,400,20,15:GOSUB 660
640 IF xp=15 OR xp=16 THEN IF yp=y OR yp=y+1 THEN SOUND 2,200,20,15:ac=ac+1:GOSU
B 660:LOCATE yp,xp:PRINT" ":LOCATE yp,xp+1:PRINT" ":
pa=1
650 RETURN
660 LOCATE #1,4,1:PRINT #1,"AC:";USING "##";AC
670 LOCATE #1,13,1:PRINT #1,"FA:";USING "##";FA
```

```
680 IF FA>19 THEN GOTO 700
690 RETURN
700 P=AC*15:FOR A=1 TO 20:A$=INKEY$:NEXT A
710 GOTO 840
720 SYMBOL AFTER 160
730 SYMBOL 160,224,240,240,249,135,126,63,0
740 SYMBOL 161,0,0,129,64,253,255,248,1
750 SYMBOL 162,60,78,191,255,129,66,36,24
760 SYMBOL 163,110,255,126,255,255,110,0,0
770 SYMBOL 164,3,11,5,3,255,127,31,15
780 SYMBOL 165,192,208,160,192,255,254,248,240
790 av$=" "+CHR$(160)+CHR$(161)
800 pc$=CHR$(162)+CHR$(8)+CHR$(10)+CHR$(163)
810 ba$=" "+CHR$(164)+CHR$(165)+" "
820 RETURN
830 CALL &BD19:RETURN
840 REM *** GAME OVER ***
850 FOR A=1 TO 20:FOR B=100 TO 200 STEP A:SOUND 1,B,1,15,0,0,31:NEXT B:NEXT A
860 INK 0,0:INK 1,26:INK 2,15,0:PAPER 0:BORDER 0:PEN 1:MODE 0
870 PEN 2:LOCATE 6,7:PRINT"GAME OVER"
880 PEN 1:LOCATE 4,12:PRINT"PUNTOS:";USING "######";P
890 PEN 3:INK 3,15:LOCATE 5,17:PRINT "OTRA? (S/N)"
900 FOR A=1 TO 50:A$=INKEY$:NEXT A
910 PEN 1
920 IF INKEY(60)=0 THEN RUN 250
930 IF INKEY(46)=0 THEN CALL 0
940 GOTO 920
```

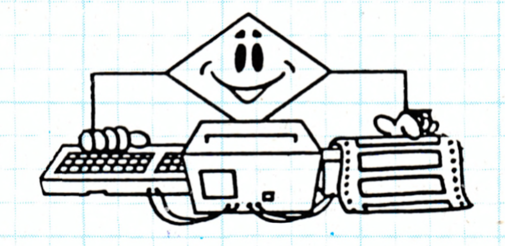


MUSCULOS

```
10 REM **    MUSCULOS    **
20 REM *                  *
30 REM ** ANGEL GARCIA **
40 REM *                  *
50 REM **    G. T. S.    **
```

```
60 REM
70 INK 0,0:INK 1,26:INK 2,8
80 BORDER 0:PAPER 0:PEN 1
90 MODE 0
100 ORIGIN 310,200
110 FOR A=0 TO 2*PI STEP PI/50
120 PLOT 0,0,2:DRAW SIN(A)*(150+RND*180),COS(A)*(80+RND*160)
130 NEXT A
140 PRINT CHR$(22);CHR$(1)
150 SPEED INK 30,30
160 LOCATE 7,13:PEN 1:PRINT "MUSCULOS"
170 INK 2,8,0
180 RESTORE 1020
190 READ A,B:IF A=-1 THEN GOTO 180
200 F=440*(2^(B/12)):T=ROUND(12500/F)
210 SOUND 1,T*5,A*10,15
220 SOUND 2,T*3,A*10,15
230 IF INKEY$<>"" THEN 250
240 GOTO 190
250 REM *** MENU ***
260 MODE 1
270 INK 3,11
280 INK 2,8
290 ORIGIN 0,0:DRAWR 600,0,1:DRAWR 0,399:DRAWR -600,0:DRAWR 0,-399
300 WINDOW 8,32,6,25
310 PRINT " ":PRINT" "
320 PEN 3:PRINT "**** ELIGE TU OPCION ****"
330 PRINT " "
340 PEN 1:PRINT "     1. CUESTIONARIO"
350 PRINT " "
360 PRINT "     2. LISTAR DATOS"
370 PRINT " "
380 PRINT "     3. TERMINAR"
390 PRINT " "
400 PRINT" "
410 PEN 3:PRINT"*************************"
420 IF INKEY(64)=0 THEN GOTO 460
430 IF INKEY(65)=0 THEN GOTO 880
440 IF INKEY(57)=0 THEN MODE 1:CALL 0
450 GOTO 420
460 REM **** CUESTIONARIO ****
470 MODE 1:INK 1,26:INK 2,20:INK 3,8
480 FOR P=1 TO 20
490 MODE 1:PEN 1:PRINT"****** MUSCULOS DEL CUERPO HUMANO ******"
500 N=INT (RND*3)
510 IF N=0 THEN RESTORE 960
520 IF N=1 THEN RESTORE 980
530 IF N=2 THEN RESTORE 1000
540 READ R$,NN:NN=INT(RND*NN):FOR Z=0 TO NN:READ I$:NEXT Z
550 PEN 3:PRINT" "
560 PRINT"PREGUNTA:";P;TAB(17);"MUSCULO: ";I$
570 PRINT " ":PEN 2
580 PRINT " "
590 PRINT "A QUE PARTE PARTE DEL CUERPO CORRESPONDE";:PRINT " ":PRINT"
 EL MUSCULO CITADO:"
600 PRINT" ":PRINT" "
610 PEN 3:PRINT "           (PULSA 1,2 o 3)"
620 PEN 1:PRINT " "
630 PRINT" ":PRINT "          1. CABEZA (Y CUELLO)"
640 PRINT" ":PRINT "          2. TRONCO (TORAX-ABDOMEN)"
```

```
650 PRINT" ":PRINT "            3. EXTREMIDADES"
660 SOUND 1,100,10
670 REM
680 IF INKEY(64)=0 THEN NR=0:GOTO 720
690 IF INKEY(65)=0 THEN NR=1:GOTO 720
700 IF INKEY(57)=0 THEN NR=2:GOTO 720
710 GOTO 670
720 PEN 2:PRINT " ":PRINT" ":IF NR=N THEN PRINT "!!!CORRECTO!!! LA RESPUESTA ES
";R$:FOR B=1 TO 3:FOR A=15 TO 0 STEP -1:INK 0,A:SOUN
D 1,A,1:NEXT A,B:AC=AC+1
730 IF NR<>N THEN PRINT "INCORRECTO. LA RESPUESTA ERA ";R$:SOUND 1,600,100:FOR A
=1 TO 100:PLOT RND*600,RND*400:NEXT A
740 NEXT P
750 MODE 0:FOR A=1 TO 15:INK A,27-A:NEXT A
760 PEN 5:PRINT "**** RESULTADOS ****"
770 PRINT" ":PRINT" "
780 PEN 2:PRINT "  ACIERTOS.....";AC
790 PRINT " "
800 PEN 3:PRINT "  FALLOS.......";20-AC
810 PRINT" ":PRINT" ":PRINT" "
820 PEN 1:PRINT"  PORCENTAJE:";AC*5;"%"
830 PRINT" ":PRINT" ":PRINT" "
840 PRINT "********************"
850 FOR A=0 TO 100:A$=INKEY$:SOUND 1,A,1,15:NEXT A
860 IF INKEY$=""THEN 860
870 GOTO 250
880 MODE 2:RESTORE 960
890 FOR A=1 TO 3
900 READ A$,N
910 PRINT "- ";A$;":":PRINT" "
920 FOR B=1 TO N:READ B$:PRINT "   ";B$,:NEXT B
930 PRINT" ":PRINT" ":PRINT " "
940 NEXT A
950 GOTO 850
960 DATA CABEZA,9
970 DATA TEMPORAL,MASETERO,PTERIGOIDEO,ORBICULAR,SUPERCILIAR,BUCCINADOR,LINGUAL,
ESTERNOCLEIDOMASTOIDEO,CUTANEO
980 DATA TRONCO,8
990 DATA PECTORAL,SERRATO,INTERCOSTAL,RECTO,OBLICUO,TRANSVERSO,CUADRADO,DIAFRAGM
A
1000 DATA EXTREMIDADES,18
1010 DATA DELTOIDES,SUPRAESPINOSO,INFRAESPINOSO,REDONDO,SUBESCAPULAR,BICEPS,TRIC
EPS,BRAQUIAL,CUBITAL,RADIAL,SUPINADOR,EXTENSORES,FLE
XORES,SARTORIO,SEMITENDINOSO,TIBIAL,PERONEOS,GEMELOS
1020 DATA 8,4,4,5,4,7,4,7,4,5,4,4,4,2,4,0,4,0,4,2,4,4,8,4,2,2,8,2,8,4,4,5,4,7,4,
7,4,5,4,4,4,2,4,0,4,0,4,2,4,4,8,2,2,0,9,0
1030 DATA -1,-1
```



BIBLIOGRAFIA

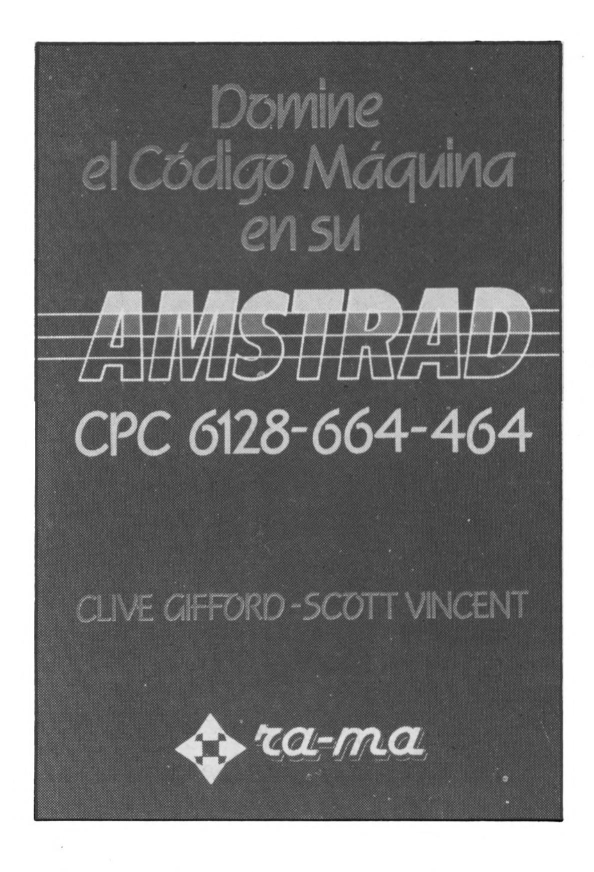


EL DOMINIO DEL AMSTRAD PCW 8256/8512

"El dominio del Amstrad PCW 8256/8512" le sitúa en la vía rápida hacia el éxito en los negocios. Lo mismo si está Vd. empezando a utilizar uno de estos ordenadores, como si está considerando comprárselo, este libro le mostrará rápidamente cómo rentabilizar al máximo su inversión.

Una gran parte del libro trata del proceso de texto.

Esta parte del libro es un medio didáctico excelente, que le conducirá desde los usos más sencillos del proceso de textos, a los más avanzados. Una sección aparte cubre el uso de NewWord, la potente alternativa de NewStarSoftware.



DOMINE EL CODIGO MAQUINA EN SU AMSTRAD

Ahora tiene la oportunidad de aprender a programar en código máquina en su ordenador Amstrad. Clive y Scott —dos programadores muy competentes, con gran experiencia en libros y software a sus espaldas— son los guías ideales para ayudarle a comprender las interioridades de la programación en código máquina del Amstrad.

Debe ir trabajando en código máquina del Amstrad.

Debe ir trabajando a lo largo del libro, saltándose las secciones que le presentan una especial dificultad la primera vez que las lea. Cuando haya terminado su primera lectura, tendrá los suficientes conocimientos como para poder comprender aquellas secciones que dejó sin completar la primera vez que pasó por ellas.


AMSTRAD
CPC
OCR
MÉMOIRE ÉCRITE
MEMORY ENGRAVED
MEMORIA ESCRITA
ACME
https://acpc.me/